Facing tommorrow's needs for higher education. January 1986.

Universities Council of British Columbia

FACING TOMORROW'S NEEDS IN HIGHER EDUCATION
British Columbia University Education into the 1990's

Summary of the Universities Council's Report

Introduction

The university system, in endeavouring to meet provincial needs, has reached a level of public funding which, in the Government's view, is difficult to sustain, at least in the immediate future. This view implies a reduction in spending, yet with the requirement that the universities continue to provide programs of established quality and demand. (p.1)* In such a situation, the universities need reassurance about their financial prospects and the Government seeks evidence that its comments concerning downsizing are being heeded. (p.2)

Council believes these concerns could be somewhat alleviated by the Government's guarantee of a minimum funding level a few years in advance, and by the universities' indication of the maximum number of students they would accommodate within this announced multi-year level of funding. (p.2)

Chapter One: The Universities and Their Mission

British Columbia's three universities, fifteen colleges and five institutes constitute a comprehensive, complex and coherent post-secondary educational system offering a wide range of on-campus and off-campus studies.(pp.4-8) Council proposes a mission statement for the universities, emphasizing their unique mandate in the provision of liberal education in the arts and science, continuing education and professional development, research and the pursuit of academic excellence. (pp.9-10)

Chapter Two: Current Academic Activities

A core of arts and science programs is required at every university as a basis for sound general education and for diversification into professional and para-professional programs. In this respect, B.C. universities, while offering similar core programs and a number of closely related professional programs, have successfully achieved a high degree of specialization and complementarity: as a whole, they offer the broad range of programs expected of a mature university system. (pp.11-14)

They have done so with a high degree of quality, as monitored through program review and faculty/student evaluation, and as verified through outstanding performances recorded in many fields of instruction and research. (pp.14-16)

To preserve this quality, the universities must be able to meet the critical needs of attracting, and retaining, outstanding faculty members and of maintaining a steady infusion of young academics. These needs should be explicitly recognized through funding schemes. (pp.16-17)

---

* Page numbers refer to the text of Council's report.

B.C. universities currently constitute the most significant source of research in the province. However, they are hampered in their vital contribution to the intellectual life, social welfare, economic recovery and scientific progress of the province in several ways, a circumstance which Council believes must be addressed. To this effect, it proposes to examine the desirability of reconstituting its standing committee on research. (pp.17-19)

Chapter Three: Accessibility, Enrolment and Participation

In terms of accessibility and program flexibility, almost everyone in B.C., if he so chooses and has the intellectual capability to do so, can obtain a general university education. A substantial range of off-campus professional development programs is available as well (pp.21-23)

Available data suggest that B.C.'s participation rate lags behind the Canadian average and is well below the American average. On the other hand, it appears to compare favourably with that of many countries with equally sophisticated and productive university systems. Due to the variety of factors to be considered (e.g. enrolment ratio after secondary school graduation, and participation from non-metropolitan areas), Council concludes that the general participation rate in B.C. is a matter which requires further investigation. The determinants of participation are more complex than is often assumed. (pp.24-26)

Some important changes are occurring and increasingly are expected to affect the future nature of university education. They include:

- life-long learning, both for professional upgrading and retraining and for personal enrichment; (pp.27-28)
- emphasis on distance education: the infra-structure is present and learning at a distance is expected to augment to an even greater extent the more conventional campus education, although not designed to replace it. (p.29)

The outlook for university enrolment is that, in total, the level will be fairly stable: the increased participation of mature students is expected to offset the decline in the number of young adults in the population. This does not imply, however, that the number of students in each field of study will be static. Also, without specific knowledge about enrolment changes across program areas, it is difficult to evaluate what economic impact, if any, may occur. (pp.26-27)

Given the respective merits and deficiencies of free choice versus manpower planning, Council is of the opinion that enrolment and accessibility are best determined by student preference, which is itself often responsive to market forces. Council plans on reviewing professional program opportunities as part of the agenda of its proposed standing committee on program priorities. (pp.28-29 and 52-54)

Chapter Four: Recovery from Recession

(1) Financial Requirements

Council seeks to identify a level of funding which will keep the system in effective working order. In the last few years, this level has been less

than the universities have requested, but more than the Government has been prepared to supply. (p.32)

Council has based its 1986/87 budget recommendations to the Government on the following considerations (pp.32-35):

- the reduction of the grants since 1981/82 and its estimation that further reductions would put the universities' quality of instruction and research at risk;
- the merit of predictability in budget planning to facilitate university management, particularly when revenues are not growing;
- the strength of the provincial economy;
- the need for a steady influx of fresh instructional staff.

Accordingly, these funding recommendations proposed three requirements (pp.34-35):

- an arrest to the reduction of the operating grant, coupled with an inflationary adjustment and funding for engineering education expansion commitments;
- a forward looking "triennial understanding" to provide the universities with a minimum level of support for a three year period, and
- a system coordination fund, consisting of at least two percent of the general purpose operating grant, to enhance flexibility.

In the area of capital funding, the greatest need is to protect the physical plant from deterioration and obsolescence. Annual cyclical renewal funding, in the order of 1 to 2 percent of the replacement value of the plant, is needed. (pp.35-36) The accumulated effect of restricted funding for equipment acquisition is leading to problems of obsolescence in this area as well. (pp.36-37)

(2) Accountability Requirements

Inherent in the financial management of publicly supported institutions is a responsibility to account for the prudent use of public funds. The universities' Boards of Governors, Council, the Ministry of Universities and Treasury Board have complementary roles in discharging this responsibility. (p.37) Much effort has recently been expended by the universities, Council and the Ministry in ensuring institutional accountability. (p.38)

Council proposes a dual framework, achieved through clear sets of reports, which would enable it to satisfy its own requirements as to each institution's academic and financial accountability, and meet the Government's related requirements at the system level. (p.38)

Chapter Five: Future Needs

The immediate issue consists in the stated inability of the Government to provide additional funds to the universities. The universities, on the

other hand, are expected to continue adjusting their existing services into a program mix in accord with the emerging needs of the province. (pp.40-41)

The Premier has stated that this issue could be resolved through better institutional planning leading, in turn, to appropriate priorities to guide the subsequent allocation of resources. (p.42) The Minister of Universities has further indicated the five goals to which such planning should aim: modest reduction in overall size; protection of core university programs; allowance for growth of programs of high quality, demand and need; phasing out of low quality and demand programs; enhancement of overall institutional excellence. (p.41)

With regard to program priorities, the Premier has stated that the universities' educational goals should be articulated to ensure that social and economic requirements in B.C. are met. As well, the Minister has directed the institutions to train roughly as many graduates in professional disciplines as the annual provincial need. Upon examination of such high demand fields as computer science at all three institutions and rehabilitation medicine at UBC, and with the appreciation that other such programs also have enrolment limitations, Council conclude that the universities' program priorities are not entirely in line with the Government's objectives. (pp.43-44) Council believes that the scope of professional education programs is adequate on the whole, but that more places should be provided for students within these programs. (p.48)

A combination of factors is responsible for enrolment restrictions, e.g. the lack of additional funds needed for expanding these programs, the relatively short supply of qualified faculty, the lack of a clear understanding of the detailed priorities of Government.(pp.44-45) Council sees the transformations implied in the Government's priority approach being long term; a more immediate response will consist in Council's establishing an advisory standing committee on program priorities to assist the universities in implementing their most promising program proposals in relation to Government priorities. (p.54)

In general terms, the universities' future academic directions will follow certain trends (pp.45-46):

- continuation of current developments (e.g. enhancement of the quality of core disciplines and essential professional programs; continuing emphasis on current fields of high demand; increasing applied research in the social sciences);

- enhancement of institutional complementarity and inter-institutional collaboration in specific fields of research and instruction (e.g. bio-technology, environmental studies, Pacific Rim studies, joint scientific endeavours);

- greater institutional specialization (p.47) and institutional definitions of their anticipated roles within the system. (p.48)

Council believes that the universities have reached a state of maturity such that most of their core programs are in place. In the area of program development, Council expects that basic upgrading of these core programs can

be managed through program trade-offs, while understanding that these trade-offs can only go so far in supporting natural curriculum evolutions. (p.48)

Chapter Six: Planning and Priorities

The universities, the Government and Council have specific roles in the the planning process. They should respectively be providing institutional planning, policy imperatives and overview function, in a synchronized manner. (pp.50-51)

A pressing issue is the identification of program priorities for some existing, and all pending and prospective, university programs. (p.51) Accordingly, Council proposes the establishment of an advisory standing committee responsible for reviewing material relevant to overall program planning (pp.52-54).

Chapter Seven: Major Actions Arising from the Submission

A primary purpose of Council's work is to assist in the establishment of an iterative process of program planning for university education in B.C. This process is designed to incorporate the universities' aspirations and the Government's objectives, as defined by the respective parties and subsequently coordinated.

The required actions include:

1. by Government

   a. adopt a mission statement defining the objectives of public university education in B.C.;

   b. support Council's formation of a standing committee on university program planning priorities, and subsequently contribute to the deliberations of the committee;

   c. establish a triennial understanding and a System Coordination Fund for the operational funding of university education, based upon Council's funding recommendations;

   d. provide capital funding for annual cyclical renewal to meet normal physical plant deterioration and conversion of space to alternative uses;

   e. define with Council, public accountability requirements.

2. by Council

   a. form a standing committee, with Government support, on university program planning priorities comprised of Council and university representatives, with Government input by invitation, to address, among other matters, the following agenda:

- . review of the approved new programs temporarily held in abeyance;
- . the provision of professional educational opportunities including priority, numbers of students and funding;
- . the examination of the participation rate including its determinants, adequacy and desirability of change in it;

b. reconstitute Council's standing committee on university research to address, in consultation with the Science Council, issues relating to research support and utilization by Government;

c. consult with Government and the universities to develop a dual framework to satisfy Council's requirements for accountability at the institutional level and to serve as a basis for meeting the Government's related requirements at the system level;

d. allocate system coordination funding, in light of an initial review of new programs held in abeyance and other advice of its standing committee on priority program planning.

3. by the Universities

a. participate in the deliberations of the standing committee on program planning priorities;

b. formulate an institutional role statement in light of the system mission statement, discussions of the standing committee on program planning priorities, campus aspirations and funding levels. It should address such matters as academic development priorities, size of enrolment, and size of faculty complement including renewal requirements;

c. develop a triennial budget request based on a role statement and academic priorities;

d. advise Council on university research through participation in Council's standing committee on university research;

e. assist Council in developing a satisfactory framework for public accountability;

This submission presents the Universities Council's current thinking on the state of the university system in British Columbia. The proposed actions, if found acceptable, require continued cooperation of all the partners in this enterprise - the Government, the universities and the Council.

FACING TOMORROW'S NEEDS IN HIGHER EDUCATION

British Columbia University Education into the 1990's

THE UNIVERSITIES COUNCIL OF BRITISH COLUMBIA

JANUARY 1986

CONTENTS

		Page
INTRODUCTION		1
CHAPTER ONE	The Universities and Their Mission	4
	A. The Universities	4
	1. The University of British Columbia	
	2. Simon Fraser University	
	3. University of Victoria	
	B. Other Institutions	5
	1. Community Colleges	
	2. Provincial Institutes	
	3. Other Institutions and Organizations	
	C. Mission of the Universities	8
CHAPTER TWO	Current Academic Activities	11
	A. Scope of Academic Programs	11
	1. Similarity	
	2. Diversification	
	B. Measures of Quality	14
	1. Program Review	
	2. External Indicators	
	C. Faculty Renewal	16
	D. Research	17
CHAPTER THREE	Accessibility, Enrolment and Participation	20
	A. Structural Considerations	21
	1. Universities	
	2. Open Learning	
	3. Colleges	
	4. Institutional Accessibility	
	B. Demographic Considerations	24
	1. Population Projections	
	2. Participation Rates	
	3. Adult Education	
	C. Motivational Considerations	27
	1. Retraining and Upgrading	
	2. Personal Enrichment	
	D. Other Considerations	28
	1. Manpower Planning	
	2. Distance Education	
CHAPTER FOUR	Recovery From Recession	31
	A. Financial Requirements	32
	1. Operational Funding - A Triennial Understanding	
	2. Capital Funding	
	3. Equipment	
	B. Accountability Requirements	36

		Page
CHAPTER FIVE	Future Needs	39
	A. Immediate Issues	39
	B. Concerns of Government	40
	1. Governmental Short and Long-Term Objectives	
	2. Professional Education	
	C. Future Academic Directions	44
CHAPTER SIX	Planning and Priorities	49
	A. Nature of the Planning Process	49
	B. Recognition of a Priority Concept	50
CHAPTER SEVEN	Major Actions Arising from the Report	55

CHARTS:

. Non-Vocational Enrolment in Public Institutions (1969-1984)	8
. Program Similarity and Diversification	13
. Per Capita Enrolment in B.C. universities	20
. Full-Time Post-Secondary Enrolments as Percentages of the 18-24 Age Group Population by Program Type (1974/75 and 1983/84)	25
. University General Purpose Operating Grants - Current and Constant 1985 Dollars (75/76 - 85/86)	32
INDEX	57

INTRODUCTION

At the turn of this century, British Columbians seeking access to university education had to go elsewhere to accomplish their purposes. Commencing with a few classes in a high school setting and with considerable help from McGill University, a modest start to change this state of affairs culminated in the eventual establishment of The University of British Columbia in 1915. From such humble beginnings, British Columbia's higher educational system has evolved into a complex network of post-secondary educational institutions.

The universities have been established by law as autonomous institutions; hence, they compete with one another for the best students, for faculty, and, of course, for financial support. British Columbia does not have an integrated university system in the style of the states of New York or California. Nonetheless, Council finds it convenient and useful to talk about the institutions as if they were a unique group, or system, concerned - along with other bodies - with the common purpose of supplying higher educational services for the primary benefit of British Columbians.

Hundreds of millions of dollars have been invested in physical plant and facilities and a very large operating budget is required, annually, to keep the university system in working order. As a result of this public investment in higher education, the sons and daughters of British Columbians - and, nowadays, parents and grandparents too - have had the all important opportunity for advanced learning brought within easier reach. However, given the pace of the growth of knowledge and the rapidity with which it is now communicated, there is little reason to feel complacent about what should be considered a very satisfactory achievement. The record shows that, in the past, the need for higher education has been addressed head-on. What about the future?

Faced with the task of dividing a shrinking supply of funds among many worthy services, the Government has transmitted in the recent past to the Universities Council signals which seemed to say that:

- the university structure, in endeavoring to meet social demand and, in particular, formal requests from Government for specific professional programs, had reached a level of public funding difficult to sustain, at least in the immediate future;

- measures must be adopted to control public spending in universities; and,

- in this painful contractionary process, every effort had to be made to preserve the healthy, vigorous branches of learning and, in particular, to ensure that the higher education institutions participate fully in the all-out effort to make the provincial economy more competitive in a rapidly changing world.

In 1985/86, Council has received no information from Government to contradict this view.

From Council's perspective, the process of absorbing over several recent years a succession of fiscal reductions has put the universities in a difficult financial position. Still caught in the outcome of earlier spending decisions, and restive over both post-secondary education's declining share of provincial expenditures and the method of allocating the available funds among them, the universities applied the spending brakes across a wide range of activities: early retirements were encouraged, salaries held down, entry into some fields restricted, tuition fees rose, some programs put on hold and other programs reduced or shifted elsewhere. The result has been that B.C. universities' relative positions vis-a-vis other Canadian universities have noticeably declined. And, along with these considerations, the universities - accustomed to making their own program decisions internally - have now become deeply concerned with the question of what lies ahead.

Insofar as Council interprets the current position of the Government, it is that, with the best of goodwill, the Government cannot now undertake to grant funds for general operating purposes on the scale of the seventies. Furthermore, it is entitled to ask pertinent questions about the need for, and use of, any funds which it is able to supply. The Government's advisor on these matters is Council.

Since the Government's principal role has been, traditionally, that of a senior financial partner, it may be assumed that the 'downsizing' concept it has set forth has some significance for the size of the aggregate commitments the Government would be inclined to consider reasonable in the near term. If the universities were to conclude, for some reason, that much larger financial support was required for their legitimate operations, it appears that the additional funds would have to come from other than Government sources.

Thus, on the one hand, there are the universities, very much in need of both general and specific reassurances about their immediate constrained state and outlook. Meanwhile, on the other hand, the Government is looking at both Council and the universities for evidence that its recent observations about 'downsizing' have been, or will be, heeded.

As the following discussion will show, Council's position is that, although it would wish that the universities could emphasize the inter-connectedness of their individual decision-making rather more than they do, Council is anxious that the exigencies of the moment should not be allowed to cloud awareness of future possibilities.

Some of the uncertainties could be handled if two guideposts were put into place. These are:

a. The Government should endeavour to commit an appropriate funding level so that the universities would know, for 3 to 5 years in advance, the firm relationship between their spending and revenue possibilities.

b. The universities, given such funding information, should in turn indicate the number of students they can accommodate within a given diversity of programs for the funding period described.

Following the definition of these two guideposts, a mutually acceptable relationship between the Government and the universities could be defined.

With these important relationships developed, Council believes that the normal academic and market forces, coupled with some increased attention to the complementary activities of the other institutions in the post-secondary educational system, will provide the environment for growth and development.

For the purpose of discussing these varied issues, this submission is organized along the following lines: Chapter One describes the institutions constituting the B.C. post-secondary education system and outlines the universities' particular mission within this complex and comprehensive system. Chapter Two describes the present state of academic activities, while Chapter Three addresses accessibility, enrolment and participation considerations. Chapter Four examines the financial and accountability requirements of the university system. Chapter Five identifies those general matters which need further attention. In Chapter Six, the discussion turns to the complex problem of tying together the efforts of all the major participants in the delivery of higher educational services and discusses the concept of program priorities. The principal actions are brought together in Chapter Seven.

CHAPTER ONE

THE UNIVERSITIES AND THEIR MISSION

The post-secondary education system has undergone remarkable change and development over the past seventy years. The University of British Columbia, the province's first university, was established in 1915. In the span of one lifetime, a comprehensive and complex post-secondary education system has been established which now incorporates three large and respected universities, as well as a system of community colleges, provincial institutes, an Open Learning Institute, the Knowledge Network and, recently, the privately funded Trinity Western University. This chapter focuses primarily on the publicly funded universities, provides some brief historical data and reviews and identifies the mission to which they aspire.

A. THE UNIVERSITIES

There are three publicly funded universities in British Columbia.

1. The University of British Columbia

Located in the suburb of Point Grey in the City of Vancouver, the university dates back to 1915 when it had two teaching faculties: Arts and Science, and Applied Science. A third faculty, Agriculture, was added two years later. By 1929, fourteen of the twenty-four teaching departments were in Arts and Science. Survival, not expansion, was the concern during the depression in the 1930's.

The Faculty of Graduate Studies was formed in 1947-48 to coordinate and supervise regulations for all graduate degrees. In that year, masters programs were available in Arts, Science, Social Work, Applied Science, and Agriculture. Doctoral programs were offered only in Physics, Zoology, Biology and Botany.

The post World War II period has been a period of continuous development, with the latter portion being one of 'filling-in-the-gaps' and extending into more graduate work. By 1970, UBC was a comprehensive university with 12 faculties, 8 schools, and over 60 departments. Current program offerings are discussed later in this report.

2. Simon Fraser University

In 1962 the premier, W.A.C. Bennett, determined that a new university should open its doors within 27 months - B.C.'s instant university. The site chosen consisted of 1,200 acres, 240 offered by the provincial government and the rest donated by the municipality of Burnaby, located on the summit of Burnaby Mountain. The winning design in the architectural competition called for a campus which was a single entity, compact and accessible. Rather than having separate buildings for each department, space was to be multi-purpose.

The planning assumptions were that Phase I was to accommodate 1,800

students and to be completed by the autumn of 1965, Phase II to accommodate 7,000 students by 1971, and then eventually Phase III would be targeted for an enrolment of 18,000.

SFU opened its doors in 1965, offering its students an instructional mode which was somewhat non-traditional by Canadian standards. Rather than the usual eight month winter session, SFU's academic year was divided into three independent periods or trimesters. A second characteristic was a more tutorial mode of instruction, making extensive use of teaching assistants and small groupings of students.

The main developments since 1970 in SFU's academic structure have been the creation of three major faculties. A reorganization of the university in 1985, following a university-wide review and resulting in program reductions, led to the transformation of the Faculty of Engineering Science into a broader Faculty of Applied Science; the Faculty of Interdisciplinary Studies became a Division within the Faculty of Arts.

3. University of Victoria

Although the University of Victoria was not established until 1963, its predecessor, Victoria College, goes back to the turn of the century. After occupying several different sites in Victoria, it moved in 1922 from Victoria High School to Craigdarroch Castle, remaining there until 1946 when it moved to the Lansdowne campus (now part of Camosun College) of the Provincial Normal School.

The Normal School in Victoria became in 1956 the Faculty of Education of Victoria College, thereby more than doubling the College's enrolment to nearly 600. The next seven years were a transitional period, culminating in the establishment of an autonomous university. In 1959-60, third year courses were offered in Arts and Science and in Education. Fourth year courses in these fields were introduced the following year. In 1961, still in affiliation with UBC, the College awarded its first bachelor's degree. Late in this transitional period, the 284 (now 381) acre campus at Gordon Head was acquired through the cooperation of the Department of National Defence and the Hudson's Bay Company.

By 1970, two dozen departments were operating within the faculties of Arts and Science, Education, and Fine Arts. Subsequently, faculties of Law, Human and Social Development, and a fledgling Faculty of Engineering were added.

B. OTHER INSTITUTIONS

In addition to the publicly funded universities there are a number of other post-secondary institutions in the province.

1. Community Colleges

Beginning in the mid-1960's, B.C. established, over a ten year period, a system of more than a dozen comprehensive, community-oriented colleges serving every region of the province. In a period typified by a major expansion in the number and kinds of post-secondary institutions, this

development is noteworthy in that B.C. was the pioneer in Canada in the development of the community college concept.

B.C.'s colleges are structured unlike those in most other provinces. Only in Alberta and B.C. do the colleges have a university transfer function; in Ontario, by contrast, colleges are not an option for the university-bound student. In Quebec, a two year college diploma is a prerequisite for admittance to university rather than an optional substitute for a portion of the university curriculum. In B.C. the university transfer route through the colleges is voluntary and forms an element of the provincial participation rate for university level education.

The programs in the colleges are no more than two years in duration and are frequently less than a year. The programming is comprehensive in scope, including academic programs which transfer to universities, career/technical and vocational programs, and college prepatory programs which teach high school literacy and numeracy. Non-credit, continuing education courses are also provided.

Three characteristics of the colleges are modest tuition fees, an open admissions policy, and community orientation. Initially, the colleges were integrated into school districts with college councils comprised of elected school board trustees, and received some financial support from local taxes. While college councils are now appointed by the provincial government, and local taxation for colleges has been eliminated, the colleges continue to place priority on programs which meet the distinctive needs of the region in which they are located.

An amendment to the Public Schools Act in 1958 permitted the establishment of community colleges in affiliation with UBC but this option was not exercised. Further amendments to the Act in 1963 enabled school boards to establish colleges to provide the first two years of university work and other post-secondary instruction to persons over school age. The first two colleges were established in Vancouver and Castlegar in 1965 and 1966 respectively. Four more were created in 1968 and 1969, and eight between 1970 and 1975. The newest college, serving Surrey and Richmond, was formerly a division of an existing college and brings the total number of colleges currently operating in B.C. to fifteen.

In 1971 the provincial government began to meld the province's existing vocational schools into the emerging community college system. The only school which was not so melded at the time was the Burnaby Vocational School, which remained as a separate institution under the name of the Pacific Vocational Institute until 1985 when it was amalgamated with the B.C. Institute of Technology.

2. Provincial Institutes

The provincial institutes differ from the colleges in that they each have a specific program mandate and seek to serve students from all over the province, rather than primarily local students. The British Columbia Institute of Technology and the Open Learning Institute provide a broader spectrum of courses than do the other three institutes. The provincial institutes are:

a. British Columbia Institute of Technology (Burnaby)

BCIT was established in 1964, aided by federal funds. It offers two year diploma programs and is planning post-diploma programs. In 1985, it amalgamated with the neighbouring Pacific Vocational Institute. PVI was the successor to the Burnaby Vocational School, the latter having been established in the late 1950's.

b. Emily Carr College of Art and Design (Vancouver)

With a predecessor established in 1925, and existing in its present location since 1980, it offers a four year diploma in more than fifteen major areas of study.

c. Justice Institute (Vancouver)

The Justice Institute was the first in Canada to train all components of the provincial justice system including police, corrections, and court personnel. It was formed in 1978, but its components predate it by decades in some cases.

d. Pacific Marine Training Institute (North Vancouver)

Existing in more or less its present form since 1975, it offers programs for the commercial shipping, fishing and ferry industries.

e. Open Learning Institute (headquarters in Richmond)

This innovative institution was established in June 1978 with a comprehensive mandate to provide programs of study

i) at the undergraduate level in arts and science,
ii) in career/technical and vocational areas, and
iii) in adult basic education,

using a specific distance education delivery mode to reach students for whom traditional instructional methods are inaccessible. By 1981 over 100 courses had been developed. While OLI has no campus as such because its programs are delivered by distance education means, it currently has three regional advisory centres throughout B.C.

3. Other Institutions and Organizations

a. Open University Consortium

Established in 1984, the Consortium makes it possible for students to obtain a recognized university degree through the Open Learning Institute by combining classroom-based and home-study courses from all member institutions; i.e. UBC, SFU, UVic, OLI and the Knowledge Network.

b. Knowledge Network of the West

In the spring of 1980, the provincial government set aside funds for the development of educational telecommunications in B.C. Public cable television service was introduced to homes throughout the province in January of 1981.

The Knowledge Network is a telecommunications network and not an educational institution. Course and program development is vested in educational institutions, and government ministries and agencies. Credit and non-credit courses, and general interest programs, are broadcast.

c. Other Degree-Granting, Non-Theological Institutions

There are a number of institutions based in B.C. which are authorized to grant degrees but which are not part of the public education system; most are restricted to theological degrees. Trinity Western University (formerly College) in Langley, founded by the Evangelical Free Church of America, is the largest private institution to offer non-theological degrees. External institutions, such as Gonzaga University or City University, have provided instruction in B.C. from time to time which leads to a degree, but the degree has been conferred outside the province - generally outside the country.

The following table shows quantitatively the composition of post-secondary enrolment and its growth over a fifteen year period.

NON-VOCATIONAL ENROLMENT IN PUBLIC INSTITUTIONS
1969 - 1984

Source: Ministry of Education, Post-Secondary Enrolment Statistics

	UNIVERSITY TRANSFER		CAREER/ TECHNICAL		COLLEGE PREPARATORY		TOTAL	
	FULL-TIME	PART-TIME	FULL-TIME	PART-TIME	FULL-TIME	PART-TIME	FULL-TIME	PART-TIME
UNIVERSITIES								
1969	30,544	4,653	-	-	-	-	30,544	4,653
1974	30,378	7,860	-	-	-	-	30,378	7,860
1979	31,069	12,770	-	-	-	-	31,069	12,770
1984	35,468	15,312	-	-	-	-	35,468	15,312
COLLEGES & INSTITUTES								
1969	3,052	2,563	3,282	2,337	67	411	6,401	5,311
1974	6,847	5,513	6,721	8,408	613	1,515	14,181	15,436
1979	6,880	11,727	9,605	15,708	690	2,376	17,175	29,811
1984	9,293	12,577	12,502	17,630	1,003	4,784	22,798	34,991
TOTAL								
1969	33,546	7,216	3,282	2,337	67	411	36,945	9,964
1974	37,225	13,373	6,721	8,408	613	1,515	44,559	23,296
1979	37,949	24,497	9,605	15,708	690	2,376	48,244	42,581
1984	44,761	27,889	12,502	17,630	1,003	4,784	58,266	50,303

NOTE: Universities include UBC, SFU, UVic and Notre Dame to 1977. In addition, full-time vocational enrolment in 1984 was 14,496.

C. THE MISSION OF THE UNIVERSITIES

The function and duties of the universities are outlined in the University Act R.S.B.C.(1979). Part 10 states:

"Functions and duties of university

46. Each university shall, so far as and to the full extent which its resources from time to time permit, and subject to Part 12.

(a) establish and maintain colleges, schools, institutes, faculties, departments, chairs and courses of instruction;

(b) provide instruction in all branches of knowledge;

(c) establish facilities for the pursuit of original research in all branches of knowledge;

(d) establish fellowships, scholarships, exhibitions, bursaries, prizes, rewards and pecuniary and other aids to facilitate or encourage proficiency in the subjects taught in the university and original research in all branches of knowledge;

(e) provide a program of continuing education in all academic and cultural fields throughout the Province; and

(f) generally, promote and carry on the work of a university in all its branches, through the cooperative effort of the board, senate and other constituent parts of the university."

From this statutory declaration of intent it is possible to develop a Mission Statement for the universities. Council proposes the following as the mission that the universities are collectively called upon to serve, a broad system framework within which the universities may individually formulate particular role statements to guide their institutional academic developments.

a. The liberal education of selected young adults is a permanent core objective of university education. The manner of this education may be more important than the subject content. Its aim is to implant in students a lifelong desire for learning, the power of objective analysis and critical examination of data, opinions and values, so that they are better citizens as well as to help them to discover their own mental powers and limitation.

b. The continuing education of adults seeking university level instruction for their own personal growth and satisfaction is a corollary extension to the provision of a liberal education. To achieve this aim the universities are encouraged to use, whenever appropriate, modern technological means to deliver academic programs to residents throughout the Province.

c. Selected professional training is a complementary educational objective to liberal education. As well, universities are called upon to provide professional development programs to enable employed adults to meet their career advancement needs and face successfully the rapid pace of technological change.

d. The intellectual activities of research for the purposes of advancing knowledge and understanding, and the satisfaction of academic curiosity, must be a permanent major objective of university work. As part of the research continuum, the universities must include people skilled in the use, as well as the acquisition, of knowledge who are prepared to apply their skill to research tasks of direct benefit to society.

e. The intellectual activity of scholarship must be a signature characteristic of university work which preserves cultural heritage and

which re-examines past values and considers the contemporary relevance of such values.

Council invites the universities, the Government and interested members of the public to comment on the proposed Mission Statement with a view to its eventual adoption by Government as defining the public expectations of the B.C. system of university education.

Conclusions

1. A post-secondary educational system has developed in British Columbia; the component parts of the system are the universities, the colleges and institutes, the Open Learning Institute, and the Knowledge Network of the West.

2. The system so developed is distinctively British Columbian and is essentially coherent.

3. The mission of the universities includes liberal education in the arts and sciences, continuing and professional training for adults, research and the pursuit of academic excellence.

CHAPTER TWO

CURRENT ACADEMIC ACTIVITIES

The state of the universities' academic development may be reviewed by looking at the system's current academic activities, as revealed by the range of program offerings, quality of academic work, and the matter of accessibility, enrolment and participation, which is addressed in the next chapter. This section reviews the topics of academic programs, measures of quality, faculty renewal and research. These elements can usefully be viewed in terms of similarity, diversification and cooperation.

A. SCOPE OF ACADEMIC PROGRAMS

All universities are, to some extent, similar: they all offer a broad core of arts and science programs which, with a few exceptions, resemble one another and without which they would forego their claim to be universities. These very similarities, which have permitted them to establish a strong base of instructional programs in core disciplines, have led them to develop related programs in several professional fields as well. Their similar broad foundations have also enabled them to diversify and, to some extent, to complement one another's professional and para-professional programs. In this context, it is equally true to say that all our universities are different from one another.

The University Act charges B.C. universities with the task of providing instruction and establishing facilities for the pursuit of original research "in all branches of knowledge." With the continuing expansion of knowledge, it is clearly an impossible responsibility for any single university to assume, but it is one which a system of institutions can approach with some integrity.

Our universities have filled their mandate to the best of their ability. A program inventory compiled for the system clearly establishes that most fields of instruction and research are present in the B.C. university system. The major exceptions are optometry and veterinary medicine which, even in earlier expansionist times were never very seriously considered for implementation in the province.

Not all fields are present at all three universities, nor are they present at every level of instruction. But, with the exception of a few areas of specialization, it would be difficult to fault the system as a whole for failing to provide the broad range of offerings expected of mature institutions.

The institutions have been established as three distinct and autonomous entities rather than as the intrinsic components of a 'university system'. Their mandate to instruct in "all branches of knowledge" did not originally constrain them to assume specific roles, yet their current strengths are, on the whole, complementary rather than merely duplicative. It is to the universities' credit that this complementary system has evolved with little external direction, but primarily through inter-institutional consultation.

The similarity and diversification of their programs is examined below.

1. Similarity

All our universities offer a comprehensive range of programs in the humanities, the social sciences, the natural sciences and mathematics. The Open Learning Institute offers, as well, undergraduate concentrations in some of these same disciplines. Indeed, those disciplines which constitute the broad base of humanistic and scientific knowledge, which a university is expected to provide, are well developed at all our institutions, both on campus and through distance education means.

In the professional fields, there is some duplication, and even triplication, of certain general offerings. Some fairly similar programs are offered at two or three institutions, while others have evolved at different institutions to provide unique or complementary features. In this context, it should be remembered that, for the last ten years, one of Council's main criteria for reviewing the universities' new program proposals has related to 'unnecessary duplication'. Essentially, Council has ensured that new programs only 'duplicate' existing ones if the new programs present a different orientation in an existing field for which demand had been established, or if the existing programs no longer satisfy, nor could be expanded to meet, demonstrated demand.

In electrical and computer engineering, for example, there is a considerable overlap between the newly developed concentrations in SFU's B.A.Sc. program and options in UVic's B.Eng. program. UBC offers as well within its B.A.Sc. program the same options offered at the other two universities. Yet it is commonly believed that even this somewhat triplicated program may not be able to meet the projected demand for computer and electrical engineering graduates.

2. Diversification

Program diversification takes mainly three forms in our institutions:

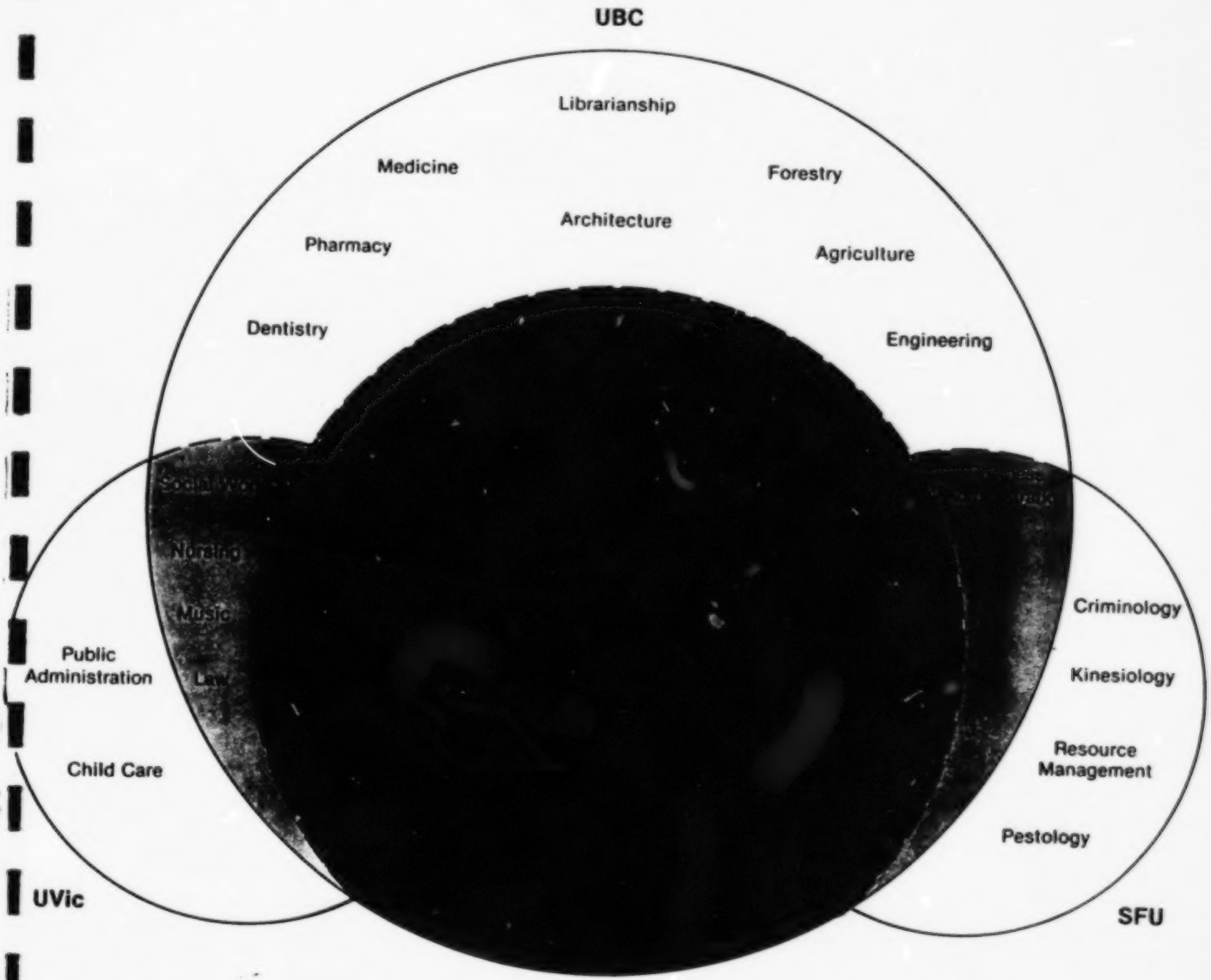
- different levels of offering, particularly at the graduate level (e.g. while such core disciplines as philosophy and political science are offered at all the institutions, only UBC offers it at the level of the PhD);

- unique fields of specialization, particularly with regard to professional faculties and semi-professional programs (e.g. forestry and medicine at UBC; criminology and kinesiology at SFU; child care and public administration at UVic);

- differentiation and complementarity in either approach or structure within the same general purpose areas (e.g. education at UBC, SFU and UVic; urban and rural social work approaches at UBC and UVic respectively).

The institutions' program similarity and diversification is graphically represented in the following figure.

PROGRAM SIMILARITY AND DIVERSIFICATION



one university

two universities

all three

These brief comments describe a university system in B.C. which provides a rich and varied scope of educational programs. They range from one institution offering several levels of specialization within a unique area of study (e.g. agriculture, forestry or medicine at UBC) to a variety of programs in the same broad field offered by all three (e.g., the well developed programs in theoretical and applied linguistics, some of them leading to a speech and audiology program in the Faculty of Medicine; or the system's various programs in general, clinical, counselling and physiological psychology).

B. MEASURES OF QUALITY

The universities and the Minister have both stated their adamant concern, supported by Council, that the quality of university instruction and research be the foremost consideration, whatever the level of funding obtained. However, when it is almost impossible to reach agreement on the very nature of quality, how can it be assessed? Far from being a rhetorical question, it is one to which the requirements of institutional accountability must find an answer.

Thus, quality is imperfectly measured against certain academic standards, through program review and through external competition and comparison. While the universities have control over the former and establish their own standards, the latter provides an impartial peer evaluation of institutional resources and performance.

1. Program Review

Three types of reviews are customarily conducted: of existing programs, by the institutions; of professional programs, by an accrediting board; and of new programs, by Council.

a. Existing Programs

Review procedures exist at all the institutions, including the Open Learning Institute. At the universities, these reviews often apply to administrative units (departments, faculties) as well as to the programs themselves. The reviewing teams vary in their composition, sometimes including external reviewers. These peer reviews often occur as a matter of course when a change of administration takes place (new department head, new dean). In other cases, a unit may have been selected for review for other causes which are internally determined. While the procedures of those reviews and the criteria they address are public knowledge, their findings are generally not reported and the Council has not, as a rule, requested to be informed of the review committee's findings and recommendations (a notable exception being the review of the UBC Faculty of Education in 1978).

In the expectation that a simple arrangement could be made without interfering with the review process, Council intends to ask the universities for assistance in keeping itself more fully informed. Moreover Council invites comment from each university on the operational adequacy of its existing program review procedures and about any changes which may be envisaged. In particular, Council is interested to know whether an automatic

cyclical review process used in other jurisdictions whereby programs are reviewed every, say, five years, is a desirable approach for B.C. universities.

b. Professional Accreditation

The universities also undergo external professional accreditation reviews for such programs as medicine, engineering, nursing, architecture, planning, etc. Accrediting agencies may rule or simply recommend on such matters as curriculum, length of program, minimum equipment provision or number of faculty. These reviews occur at regular intervals, ranging from three to seven years, and validate the institutions' professional programs. In this case, also, Council intends to ask the universities for assistance in keeping itself fully informed.

c. New Programs

Of the main criteria reviewed by Council - need, cost and quality - the last is one in which it claims no particular expertise. It relies on academic advice provided by the other universities or by consultants retained either by the university submitting the new program or by Council itself. As a matter of routine it also requests information on admission requirements; curriculum; library holdings; laboratory facilities; faculty strength, including research grants received and/or anticipated; planned program expansion; current and future program evaluation. Council is aware that many of these quality measures are the sole responsibility of the universities, e.g., admission requirements are established by the university Senate, and the determination of curriculum by the Faculty. Nevertheless, the review by Council of the usual indicators of quality serves the following purposes:

- Council expects the full description of each new program proposed by a university, and the indication of this program's potential quality, to be used as a measure of its contribution to the university and the university system, and as a safeguard for the university and the university system's academic integrity.

- Council trusts the university to derive benefit from the academic evaluation of its program proposal and the recommendations received from external consultants and from the other two B.C. universities, whose formal responses or informal comments are received in the course of Council's Program Coordinating Committee review. In the case of professional and semi-professional programs, Council has on occasion also secured comments from potential employers on the expected training and performance of the programs' future graduates.

Council's greatest concern is that, if the criteria of need and cost effectiveness are otherwise met, the universities be in the best position to ensure the programs' necessary academic rigor. In order to improve its procedure of new program review, Council invites comments from the universities as to ways in which this process may be more usefully conducted.

2. External Indicators

Canadian universities are not systematically ranked according to comprehensive criteria. There are, nevertheless, several national and international indicators which can be used for an informal assessment of a university's academic excellence. Some are easily quantifiable, such as, for instance:

- the research grants it attracts through national and international competition (e.g. UBC placed second or third, depending on the measure used, in the 1983-84 ranking of fifty-seven Canadian institutions by research funds awarded to individuals or teams);

- the ranking of its research library holdings (e.g. UBC ranked eighteenth in the 1983-84 combined American and Canadian listing, a Canadian second only to the University of Toronto (eighth) and well ahead of the next two Canadian followers: University of Alberta (twenty-seventh) and McGill University (fifty-third);

- the comparative performance of its students on such international tests as MCAT, LSAT, GMAT, etc. (e.g. in 1985 the three B.C. universities, led by SFU, topped all Canadian universities in students' results in the compulsory Medical College Admission Test taken prior to admission to medical schools in the United States and Canada).

Indicators generally relate to the quality of the faculty: its members' credentials and qualifications; teaching record; record of publications, citations, exhibitions, or major performances; honours and awards, etc. However, taking into account these and other factors, peer assessment constitutes the essential basis for faculty tenure and promotion.

Various indicators also relate to the quality of the student body: imposition of selective admission requirements to specific programs; competitive application for external research grants; academic honours and publications; source of graduate applications (provincial, national and international); subsequent faculty or professional appointments, etc.

The outstanding performance of our universities in many areas of research and instruction continues to draw favourable attention - sometimes in piecemeal fashion in the popular press - among their peers.

C. FACULTY RENEWAL

The universities have expressed their concern over the difficulties they encounter in attracting and retaining outstanding faculty members on the one hand, and in providing for an infusion in their ranks of young teachers, researchers and scholars, on the other. Council recognizes these difficulties, particularly the latter, which is of international scope and threatens the vitality of universities.

In recognition of this serious problem, Council has attempted to assist the universities through the allocation, from the University Adjustments Program grant, of a faculty adjustment fund, one component of which has been for faculty renewal. The universities have also devised their own means to

attempt a badly needed injection of 'new blood'. For instance, SFU has redirected resources from endowed money (e.g. the W.A.C. Bennett fund) to create a one million dollar "Bridge to the Future Fund" for promising young faculty appointments, linked to known retirements within the next three to five years.

A related concern is the potential financial implications for the current testing of the legality of the convention of mandatory retirement.

D. RESEARCH

University faculty members in the sciences, the social sciences, the humanities and the professional fields are all expected to conduct research as their inherent contribution to the preservation and expansion of knowledge. They supervise as well a large number of students also involved in research. In the minds of many academics and professionals, the exposure of undergraduate students to practitioners in research and the professions is at least as important as the research itself. As well, it constitutes the essential difference between education received at a university and one obtained at any other post-secondary institution.

This considerable force constitutes the most significant research element in B.C. today: in 1984-85, the universities jointly attracted over seventy-three million dollars in external research funds, three quarters of which originated from the national granting councils and other federal agencies.

A report prepared for Council by Dr. P.A. Larkin[1] describes the users of the research done by B.C. universities: other researchers, through open publication in research journals; the federal Government, mainly through consultation and the contribution of specific expertise on advisory boards, task forces, etc.; local industry, through consultancies, cooperative education programs, etc.; as well as American and Canadian companies through contractual research; and, lastly and to a regrettably lesser extent, the provincial Government.

Similarity and diversification in program offerings at the three institutions are readily observable. While they can be roughly so categorized and may, through possible imbalance in one or the other, cause concern, much less differentiation applies to research. Academically legitimate research can be pure or applied, can be conducted singly or through teamwork, can be the product of crossfertilization through the findings of previous searchers or break totally original grounds.

However, two external concerns may be held with validity: (1) that a reasonable proportion of applied research be undertaken to benefit the public directly and (2) that optimal use be made of public resources. Large and costly projects tend more and more to be operated jointly [e.g. the Western Canadian Universities Marine Biological Society (WCUMBS), at Bamfield and the Particle and Nuclear Physics Facility (TRIUMF), both interprovincial as well as inter-university]. Council's most recent

---

1 P.A. Larkin, Research at Universities in British Columbia, 1984, available upon request.

allocation has included a System Cooperation Fund component which recognizes an increased responsibility on the part of the institutions to collaborate; this recent allocation has included the funding of joint proposals for equipment (e.g. Array Processor) or joint area studies (e.g. Tri-University Pacific Rim Studies).

The Larkin report warns that the level of funded research at our universities is clearly below that of American universities of similar size and program mix (e.g. University of Washington), and attributes this difference in part to the American longstanding practice of close collaboration between Government, industry and the universities.

There is an increasing effort made in B.C. to promote collaboration between the universities and the private sector and to negotiate industrial research contracts through such activities or agencies as: the Science Council of B.C. which promotes, through its grants and scholarships, the liaison between universities and industries; the B.C. Health Care Research Foundation, with similar programs in health care research; the UBC University-Industry Liaison Program and its equivalent at the other institutions; the recently approved UBC Centre for Integrated Computer System Research; the jointly sponsored B.C. Microelectronics Society, which coordinates the universities' applied research with industry and, finally, the universities' graduate cooperative education programs. Examples of external funding for the development of joint research oriented and instructional programs have already occurred (e.g. pulp and paper engineering at UBC). In the same framework of greater and mutually beneficial collaboration, the Discovery Parks initiative is intended to facilitate the development of symbiotic relationships between university research units and specialized commercial and industrial companies.

Council's involvement with the research component of the universities has consisted of the allocation of that portion of the grant which the universities have devoted to research (approximately one-third of the total operating grant). In addition, it was able to allocate, through the University Adjustments Program, a Research Quality Fund and a System Cooperation Fund partially directed to research. Its only similar involvement in the past has been an occasional funding of research projects through the Programs of Distinction funds. But the role of Council in university research has not been well established. It has, under the University Act, power to create a committee to rationalize all matters relating to graduate programs and research in the universities, and did so briefly.

However, when the Science Council of British Columbia was established in 1978, Council understood that the responsibility for coordinating research in B.C. would rest with this newly created agency, and its own involvement in university research was for some years limited to monitoring research funds awarded to the universities through reports filed with the Secretariat on Science, Research and Development.

There are at least three serious deficiencies in this system:

. fields of research other than the physical and biological sciences, mathematics and engineering are outside the purview of the Science Council;

- the Science Council's broad mandate, which also includes the monitoring and overseeing of research conducted in the private sector, does not allow for a focus on many university research concerns, although excellent liaison has been established in the fields mentioned above.
- while the review and approval of graduate (research) programs has remained the responsibility of Council, there is no central agency responsible for addressing research issues at the universities.

A number of issues have come to light recently which seem to call for a policy response, or at least a coordinated approach, to university research. One is currently under review by Council and the Ministry: the development of a provincial Government policy for the funding of university chairs for research. Others remain to be examined in liaison with the Science Council of B.C., such as:

- assisting the provincial Government in making a more systematic use of university research capacity for solving problems of public concern, some of which have been identified by the Ministry;
- devising some means of assuring that appropriate amounts are allocated to research equipment;
- establishing responsibility for covering the substantial overhead costs of research;
- distinguishing related roles for the provincial and federal Governments in the support of research.

Accordingly, Council proposes to consider reconstituting its standing committee on research to explore with all interested parties these and related university research issues.

Conclusions

1. B.C. universities, while offering similar core programs and a number of closely related professional programs, have been successful in achieving a high degree of specialization and complementarity: as a whole, they offer the broad range of programs expected of a mature university system.
2. In so doing, they have, as well, achieved a high degree of quality, monitored through program review and faculty/student evaluation, and verified through outstanding performances recorded in many fields of instruction and research.
3. To preserve this quality and to foster their international reputation, the universities must be able to meet a very critical need: the ability to attract, and retain, outstanding faculty members and to maintain a steady infusion of young academics. This need should be explicitly recognized through funding schemes.
4. The desirability of reconstituting Council's standing committee on research should be examined with the Ministry and the universities.

CHAPTER THREE

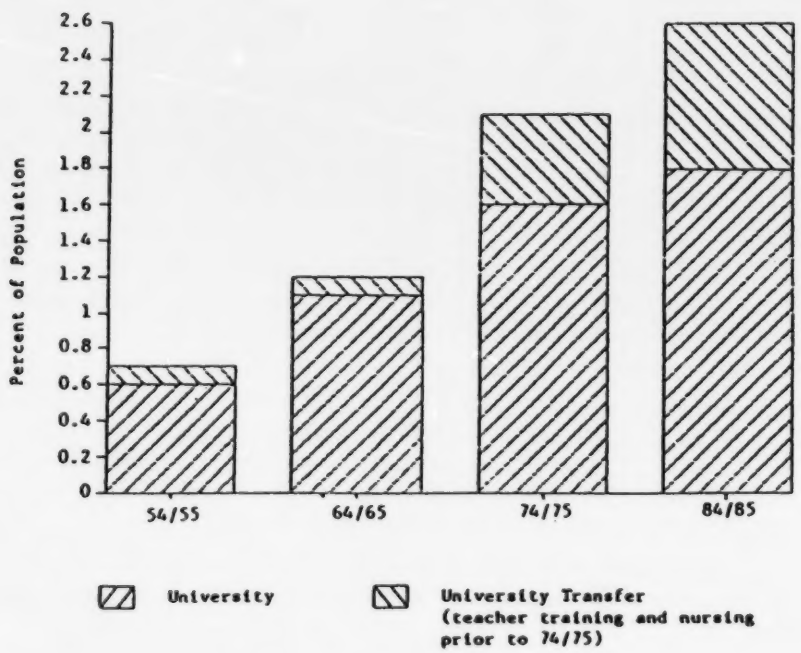
ACCESSIBILITY, ENROLMENT AND PARTICIPATION

Accessibility, enrolment and participation are separate topics which become inextricably intermingled in any meaningful discussion relating to admission to university. Examination of these three topics raises fundamental questions regarding post-secondary education in B.C.

It is difficult to determine what criteria are useful when attempting to judge whether or not the current level of university enrolment is satisfactory. There are no absolute standards and the best that can be done is to make comparisons with other jurisdictions. Regardless of how the most appropriate enrolment figure is determined, especially when the figure varies from jurisdiction to jurisdiction and from time to time in the same jurisdiction, historical data provide a reference point for beginning that task.

The percentage of the B.C. population engaged in university education has increased in a more or less linear fashion over the past thirty years. The following figure illustrates the university and university transfer enrolment for the period 1954/55 to 1984/85. Per capita involvement of both university students and university transfer students has increased steadily, with a net result that the percentage of the population involved in university education has quadrupled in thirty years.

PER CAPITA ENROLMENT IN B.C. UNIVERSITIES
and University-Transfer Programs



A. STRUCTURAL CONSIDERATIONS

A distinctive post-secondary educational system has been developed in B.C. The component parts of the system are the universities, the colleges and institutes, the Open Learning Institute and the Knowledge Network. In contrast to the more conventional stance of catering almost exclusively to the educational needs of the young and those able to attend on a more or less full-time basis, the B.C. post-secondary system has developed flexibility and adapted itself to the various needs of students. This flexibility has been achieved through university programs and expanded time tables, an open learning system, and university transfer programs in the colleges.

Council considers that post-secondary education should be regarded as an integrated system with its various parts having identifiably different characteristics. In this integrated model, all British Columbians have access to that part of the system which can provide them, as individuals, with training, education and career advancement opportunities appropriate to their individual needs, abilities and desires.

1. Universities

The universities provide the more advanced and more academically oriented aspects of post-secondary education. They are concerned with liberal arts and scientific training, research and professional education. Council views them as highly independent, competitive institutions that aspire to achieve academic excellence in the completion of their mission. It is the view of Council that the universities should be open to individuals who have demonstrated the intellectual ability, the motivation and the emotional maturity necessary to benefit from a university education. Entrance to the universities should be competitive and should be open to all adult British Columbians.

In addition to their regular day time courses, all three universities seek to provide additional campus services to non-traditional students through evening, intersessional and summer activities. Simon Fraser University has specifically designed its trimester structure, and many of its programs, to serve the needs of mature and part-time students. As an extension of its campus offerings, it also operates a downtown Vancouver centre. Thus, far from fitting into the once traditional 18 to 24 year group, its average student age is 27, and the proportion of those students holding part-time and full-time jobs is also significantly higher than at the other universities.

As well, UBC, almost from its very inception, has served non-traditional students (e.g. returning veterans of both World Wars) and is still doing so through continuing and off-campus instruction, either funded separately or from some professional faculties' operating budgets (e.g. commerce, education). The other two universities adopted the same policy as a matter of course, and the independent efforts of all three became recognized and coordinated through the ministerial creation of an Interior University Programs Board in 1976, later to continue under the aegis of the Universities Council.

2. Open Learning

B.C. occupies a predominant place on the international post-secondary

educational scene with its system of distance education. Using technology and collaboration in program development, the university system has made major strides in recent years in expanding access for students: starting with the Minister's creation of the Open Learning Institute in 1978 and the Knowledge Network of the West in 1980, it culminated with the establishment in 1984 of the Open University Consortium of B.C.[2]. This joining of the three universities, the Open Learning Institute and the Knowledge Network into a single agency responsible for the delivery of a first degree through distance education means alone, provides opportunities off-campus for the pursuit of university education in a wide range of subjects. The more flexible admission requirements of the Open Learning Institute, the institution responsible for granting the distance education degree, also facilitate students' access to university programs. In terms of physical accessibility and program flexibility, almost every person in B.C., if he so chooses and has the intellectual capability to do so, can obtain a general university education. This is particularly important when several professional groups include or encourage the holding of a bachelor's degree as part of their training requirements (e.g. accountants, teachers).

As well as collaborating in offering this first degree in arts or general studies, the universities continue to make also available through a combination of various delivery means a number of programs in many fields (e.g. health sciences, criminology, social work) at various levels (graduate, undergraduate, credit-free professional development), some of which are even developed jointly (e.g. nursing, some education courses).

3. Colleges

The colleges account for nearly one third of all headcount enrolment in academic courses. Their offerings increase the accessibility of university education through direct transfer of college credits to a university or, indirectly, by incorporating their two year university transfer courses into the Consortium's open degree requirements.

In terms of student accessibility, the colleges often substitute in arts and science for the universities at the first, and sometimes the second, year level. Their role could increase as a consequence of the current fiscal restraint. Some issues ought to be kept in mind in any serious examination of post-secondary education. For example, the following questions could be asked:

- can or should college offerings increasingly provide qualified students with an adequate alternative to the university courses in some restricted areas of high demand?

- what controlling factors are involved in the transfer of instructional responsibilities from a university to an appropriate college or institute; as, for instance, in the transfer of UBC's dental hygiene program and of the technical component of its industrial arts program.

---

2 A detailed examination of the history, nature and scope of this program development has been prepared by Council staff: Report on University Programs in the Non-Metropolitan Areas of British Columbia (1984), and is available upon request.

It is Council's view that British Columbians can take considerable pride in the wealth of opportunity that this system provides. Notwithstanding that view, however, Council also believes that the linkages between universities and colleges which as illustratively implied in the foregoing questions ought to be examined in order to enhance the integrity of the post-secondary system. Council formally began discussion of these linkages in its recently concluded planning conference last November and intends to follow up with Ministry of Education officials and other interested parties.

4. Institutional Accessibility

There are two related, but distinct, considerations when evaluating accessibility: the extent to which individuals have access to some type of further education in general, and the extent to which they have access to particular types of education. In the following categorization, the first descriptor refers to entry to the post-secondary system as a whole. The second descriptor states whether individual institutions within the system are specialized, and whether they thus accept only certain types of students.

a. Unrestricted entry, unspecialized facilities

This type of education characterizes many of the post-secondary facilities in the United States. Such institutions are open to a broad spectrum of students with widely varying ability, motivation and objectives.

b. Unrestricted entry, specialized facilities

In this type of system, post-secondary education is available to a wide spectrum of students with a wide variety of backgrounds and abilities. However, unlike the previous category, different facilities tend to specialize in specific areas of interest. Students are directed towards particular institutions, or types of institutions.

c. Restricted entry, unspecialized facilities

This resembles 19th century education in that only the select are admitted and all institutions attempt to do much the same thing. Entry is restricted by examination, by financial means or by both. This type of facility continues to exist in parts of the British Commonwealth and, in general, provides high quality education.

d. Restricted entry, specialized facilities

As in the previous category, entry may be restricted by examination, by financial means or by both. Characteristically high quality institutions accommodate only certain types of students, and the offerings at one institution are often incompatible with courses at other institutions. This form of education is often associated with the United Kingdom.

Council's view is that the post-secondary system as a whole should tend towards (b) unrestricted entry, specialized facilities but that the university sector should tend more toward (d) restricted entry, specialized facilities. Also, there needs to be considerable communication between the

component institutions in the post-secondary system in order to maximize the availability of appropriate transfer programs.

B. DEMOGRAPHIC CONSIDERATIONS

1. Population Projections

B.C.'s total population is projected to increase steadily for the next two decades, but with substantial variation among different age groups. The most rapidly growing segment of the population are those aged 65 years and over. Whereas half the population was under age 30 in 1962, half of the population will be over age 36 by the turn of the century.

In the past, those individuals aged 18 to 24 years were of greatest interest to post-secondary planners since these are the ages at which individuals have traditionally shown the greatest propensity to enrol in post-secondary education. Projections show that the 18 to 24 age cohort will decline approximately 10 percent from 1984 until the lowest level is reached around the turn of the century. Within this cohort, however, the pattern of growth and decline for individual ages varies. For example, the decline in number of 18 year olds in B.C. is already well underway and, according to Statistics Canada, will reach its trough in 1992 at a level 10 percent below that of 1984. The number of 24 year olds, on the other hand, is still increasing and will offset the decline in the 18 year olds until 1988. In other words, the decline in number of 24 year olds is lagging that of 18 year olds by several years.

While the traditional pool from which post-secondary enrolments is drawn is declining, it does not automatically follow that total enrolment will decrease correspondingly. A greater number of mature students of all ages can be expected to seek admission to the universities in the future. These will include people undergoing retraining and career advancement training, and will also include growing numbers of the retired population who seek to pursue intellectual activities which have been denied them in the past. This realignment of age distribution in the universities may compensate for any reduction in the 18 to 24 year old population.

2. Participation Rates

The rate at which the population enrols in post-secondary education, i.e. the participation rate, is important because it is, by definition, a major determinant of enrolment levels. In B.C., this statistic has attracted attention for at least two reasons: (1) B.C.'s rate appears to be below the national average and (2) the statistic has no precise, commonly accepted definition and therefore the results of any particular analysis are frequently criticized on technical grounds.

The commonly used reference point in participation comparisons is the Canadian average. Data from the Organization for Economic Co-operation and Development (OECD) and from the United Nations Educational, Scientific, and Cultural Organization (UNESCO) seem to suggest - and there are many problems with the data - that Canada's participation rate ranks favorably with much of the western, industrialized world. University enrolment in B.C. is somewhat less than in most other Provinces and considerably less than in the

United States. On the other hand it is considerably higher than in Great Britain, France, Germany or Australia. Thus, even if B.C. is below the Canadian average, and considerably below the American average, it is still on par with other nations which have sophisticated and productive university systems.

Another consideration in taking an objective look at participation is that comprehensive data are lacking. For example, part-time college enrolment is not reported to Statistics Canada, so these enrolments tend to be ignored. Furthermore, the structure of post-secondary education across Canada varies sufficiently in the non-university sector that valid comparisons are difficult. Nevertheless, the Post-Secondary Institutional Research Committee of B.C. has made an attempt to look comprehensively at full-time participation. While it excludes vocational enrolment, its data show B.C. to be below average in both college and university sectors:

Full-time Post-secondary Enrolments as Percentages
of the 18-24 Age Group Population by Program Type
1974/75 and 1983/84

	NON-UNIVERSITY INSTITUTIONS			UNIVERSITIES			ALL
PROVINCE	CAREER/ TECHNICAL	UNIVERSITY TRANSFER	SUBTOTAL	UNDER GRADUATE	GRADUATE	SUBTOTAL	TOTAL
1974/75							
British Columbia	2.8	2.7	5.5	9.1	1.2	10.2	15.8
Canada	4.8	2.5	7.3	10.7	1.3	12.0	19.3
1983/84							
British Columbia	3.5	2.6	6.1	8.6	1.4	10.0	16.1
Canada	6.3	2.6	8.8	11.6	1.5	13.1	21.9

Data from Statistics Canada show that, relative to the national average, both undergraduate and graduate students in B.C. are less likely to enrol on a part-time basis. Thus, in B.C. universities, part-time enrolment accentuates, rather than compensates for, the low full-time participation. In B.C. colleges, part-time enrolment is important. It is a much higher proportion of total enrolment than in the universities, but the information necessary for comparison to the national average is not available.

Rather than focussing on whether the rate in B.C. is high or low, perhaps the more relevant matter is to understand what determines participation in the first place. Studies across North America suggest that social and cultural factors probably have a greater significance than financial factors. In particular, the level of the parents' education appears to be a powerful influence on a child's decision to continue his or her education. In other words, if B.C.'s participation rate is viewed as a problem, then it is not a problem which can be solved simply by the injection of additional funds (thereby lowering tuition rates or creating more places at the universities), although any solution may well have a financial component.

Another approach when examining the determinants of participation is to look at the components of the aggregate rate since specific areas of concern may be masked by averages. Certain groups and non-metropolitan residents are

still poorly represented in B.C.'s universities, although many of the problems of low female participation have now been rectified. Various professional fields of study are present in B.C. but enrolment in these fields, often due to the imposition of enrolment limits, is below the Canadian average and, as a result, reduces B.C.'s overall participation rate.

A final observation is that significant progress is being made in increasing the accessibility of post-secondary education in B.C. While only 60 percent of B.C.'s students reach Grade 12 graduation, half of those who graduate go on to register in a post-secondary institution. This transfer rate from Grade 12 to post-secondary studies has risen significantly, from 35-40 percent in the late seventies to 50 percent in the mid-eighties. Equally noteworthy are the remarkable gains in non-metropolitan regions of the province in the transfer rate from Grade 12 to colleges and institutes, doubling in the last five or so years.

Council concludes that the general participation rate in B.C. is a matter which requires further investigation.

3. Adult Education

The proportion of B.C.'s adults (i.e. those over age 15 and who are not currently attending secondary school full-time) who have enrolled in at least the first year of a post-secondary program in any type of institution has been rising dramatically:

1971	23%
1976	35%
1981	41%

The impact of demographic declines on post-secondary education is being offset by a greater proportion of the adult population enrolling and by those persons who enrol remaining as students for longer periods.

Simon Fraser University serves a somewhat older student body than the average Canadian university, but other institutions are also moving in this direction. In 1984, half of SFU's students were over 24 years of age. Many of its students did not enter directly from high school: the median age of new full-time students was over 22 years.

The share of full-time undergraduate enrolment in B.C.'s universities in the 25-44 age cohort grew from 10 percent in 1971/72 to 17 percent in 1981/82. During the same period, students in the 30-44 cohort grew from 20 percent to 38 percent of the total graduate enrolment.

A federal Government study found that in 1983, one in every five Canadians age 17 and over took at least one adult education course, with the average length of the courses being 61 hours[3]. British Columbians participated to a slightly greater extent than the average Canadian.

Enrolment data indicate that British Columbians are beginning to accept

---

3 "Adult education" excluded classes taken in a full-time program, but included part-time credit study and formal training on the job.

the concept of lifelong education and this trend is expected to continue. In the future, a greater number of mature students of all ages can be expected to seek admission to universities. These will include people undergoing retraining and advanced training and it will also include growing numbers of the retired population who seek to pursue intellectual endeavours not available to them in the past.

C. MOTIVATIONAL CONSIDERATIONS

1. Retraining & Upgrading

The rapid pace of technological change in professional and technical fields means that training received as a young adult is no longer sufficient to provide competence over an entire career. This situation has created a pressure for lifelong learning which is likely to intensify in the years ahead.

The need to upgrade is so great that a 1985 study by the Carnegie Foundation for the Advancement of Teaching estimated that the money spent by corporations in the United States on in-house training and education for their employees approaches that spent by the universities. If British Columbians are to remain competitive in the continental and world markets, the existing system for adult education and career advancement must be fostered and developed further. The universities have a vital role to play in this respect in the liberal arts and sciences, in research training and in professional development.

Since the late seventies, several national organizations have called for Canada to adopt a national educational leave policy, such as is emerging in Europe, in support of recurrent education for all working Canadians. In France, for example, firms are legally required to spend 1.1 percent of annual payroll on training. (In 1980, the average spent was 1.8 percent and the level is expected to rise soon to 2 percent.) The obligation may be discharged in several ways, including in-house training or payment to state-approved institutions of continuing education.

In Canada, the Canadian Forces, an organization characteristic of the high technology environment, have upwards of 20 percent of their manpower on training or educational upgrading programs at any time.

2. Personal Enrichment

Another pressure for lifelong learning arises from the fact that education is an end in itself as well as a means to an end. Evidence that people find education personally enriching, and strongly desire it for its own sake, is that those most willing to put out the time and effort to engage in it are those who are already best educated. Participation in adult education rises steadily with the amount of schooling individuals have already attained (an average which is itself rising). The keenest adult learners are university graduates - more than 40 percent took a course in 1983. By contrast, just 5 percent of people with less than Grade 9 so participated.

The pressure for vocational upgrading and retraining obviously declines with retirement, but growing numbers of retired people may be expected to pursue intellectual endeavors which, for various reasons, they may have foregone earlier in their lives. This growing group in the population presents a resevoir of experience and largely untapped intellectual capacity which has an enormous contribution to make to society.

D. OTHER CONSIDERATIONS

1. Manpower Planning

The International Encyclopedia of Higher Education (1978) reports:

> "Two philosophies underlie the role of higher education in meeting national goals. One is the principle of free choice: students are allowed to pursue their own career objectives with little regard for how those objectives meet the nation's manpower needs. Opponents of the free choice philosophy hold that human resources are the most important aspect of a nation's wealth and as such should be used to benefit the individual and the nation alike."

The issue here concerns general manpower planning based on a comprehensive model of the entire economy. Studies of manpower needs in specific, career oriented disciplines, such as nursing or law, are less problematic since the relationship between education and the occupation is better defined and is more easily quantified.

Since the mid-sixties, federal studies of occupational manpower in both Canada and the United States have been attacked for failing to consider the adjustment of the market to supply and demand, e.g. changes in wage rates and occupational shifts by workers. Many projections were performed hastily, underemphasized the critical role of underlying assumptions, and paid insufficient attention to estimating the range of uncertainty in the projections. The 1981 report, Work for Tomorrow, (Report of the Parliamentary Task Force on Employment Opportunities for the '80's) stated that the manpower forecasts which were then available in Canada were "not of much use." It further noted:

> "...no forecasts of the number of people wanting to work in different occupations are available. That means the forecasts cannot be used to identify the occupations in which shortages or surpluses are expected to develop."

The latest federal initiative, the Canadian Occupational Projection system (C.O.P.S.), explicitly acknowledges that previous long range analyses were too mechanistic, relying excessively on economic models and giving insufficient emphasis to human knowledge and judgement through consultation.

In the early sixties, the concern across North America was primarily about labour shortages and the provision of sufficient highly educated manpower to remove possible bottlenecks to economic growth. In the seventies, concern began to include questions of oversupply. As a result, manpower approaches to education attracted renewed attention, in spite of their recognized shortcomings.

The dilemma that faces those responsible for university program planning is the extent to which these two contradictory philosophies, the free choice principle and the manpower planning principle, should be employed. The conclusions reached will have a considerable influence on enrolment planning and management.

Council is of the opinion that while it is intellectually attractive to think of planning enrolment and accessibility based on manpower needs, the reality is that the available methods for manpower planning are unreliable and often unproductive; under these circumstances, enrolment and accessibility should be determined largely by student preference, which is itself frequently responsive to market forces. However, Council is aware that the opportunities for admission into professional programs in B.C. universities are significantly fewer than the Canadian average. At the same time, it is recognized that the graduates of such programs are frequently among those who provide leadership and other productive capacity to the economy. Consequently, Council believes this matter requires examination and ought to form part of the agenda of the proposed standing committee on program priorities discussed in Chapter Six.

2. Distance Education

A comprehensive, high technology infrastructure for distance education already exists and operates in the province: the Open Learning Institute and Knowledge Network complement the off-campus offerings of the universities, which provide the majority of academic and professional upgrading programs. Distance education has been tried and proven to be of value, but it still operates on a modest scale. (For example, full-time equivalent enrolment in university programs at the Open Learning Institute is only one percent of that in the three universities. However, because most students are part-time, that one percent represents several thousand students.) The questions are at what rate, and to what extent, enrolment in distance education may be expected to grow.

With new administrative arrangements such as the Open University Consortium of B.C., and increasingly simple to use and inexpensive information technology, distance education has the potential to modify the character of post-secondary education in B.C. However, it is not a panacea. It should be viewed as complementary to on-campus offerings, serving students with special needs, and not the needs of all students, i.e. it will probably always be preferable for young, full-time students to be educated on campus because many valuable university experiences occur there outside the formal settings and programs.

Distance education enrolment may be expected to grow and greatly enrich B.C.'s post-secondary education system, but in the medium term it will be supplementary to the predominant enrolment on-campus. This holds true particularly in the case of professional development programs. However, expectations should not be inflated despite the promise distance education holds, and neither should it be seen as a means of ever replacing the traditional, campus-based, university education.

Conclusions

1. In terms of physical accessibility and program flexibility, almost everyone in B.C., if he or she so chooses and has the intellectual capability to do so, can obtain a general university education through the combined offerings of the universities, the colleges and the Open University Consortium. A substantial range of off-campus professional development programs are available as well.

2. In Council's view, B.C. should strive for universal access to the post-secondary system (including the non-university sector) but not necessarily to every program and every institution.

3. The linkages between the universities and the colleges should be examined with a view to enhancing the integrity of the post-secondary system.

4. Available data suggest that B.C.'s participation rate lags behind the Canadian average and is well below the American average. On the other hand, it appears to compare favourably with that of many countries with equally sophisticated and productive university systems. After considering several other factors (e.g. increasing the enrolment ratio after secondary school graduation, improving participation from non-metropolitan areas), Council concludes that the general participation rate in B.C. is a matter which requires further investigation, particularly since the determinants of participation are more complex than is often assumed.

5. Given the respective merits and deficiencies of the free choice principle and the manpower planning principle, Council is of the opinion that enrolment and accessibility are best determined by student preference, which is itself often responsive to market forces. Council plans on reviewing professional program opportunities as part of the agenda of its proposed standing committee on program priorities (Chapter Six).

6. Some important changes are occurring and are increasingly expected to affect the future nature and manner of university education. They include:

   - life-long learning, both for professional upgrading and retraining and for personal enrichment;

   - emphasis on distance education: the infra-structure is present and learning at a distance is expected to supplement to an even greater extent the conventional campus education, while not designed to replace it.

7. The outlook for university enrolment is that, in total, the level will be fairly stable: the increased participation of mature students is expected to offset the decline in the number of young adults in the population. This does not imply, however, that the number of students in each field of study will be static. Also, without specific knowledge about enrolment changes across program areas, it is difficult to evaluate what economic impact, if any, may occur.

CHAPTER FOUR

RECOVERY FROM RECESSION

It is the nature of the higher educational process that forward commitments be undertaken. Both students and universities are implicitly bound to an undertaking that usually lasts four and, in some categories, several additional years before the degree program is consummated. There are certain risks involved in making forward commitments of this kind, the wisdom of which one hopes to see confirmed in hindsight.

The existence of this commitment explains why the universities find the government procedure of dealing financially with one year at a time a frustrating experience. The universities are required under the University Act to stay within the limits of the operating funds available; deficits are, to all intents and purposes, not permitted. One particular disadvantage of the existing procedure from a budgeting standpoint - frequently stressed by the universities - is that the amount of annual provincial grants can vary unpredictably and, since the universities do not have certain knowledge of such changes until the new fiscal year is upon them (April lst), the net effect is to reduce the scope for effective planning. This is the forward-commitment problem referred to above. Some form of arrangement about the public monies certain to be available three or more years ahead is essential to facilitate effective management of the universities.

Higher education is a provincial responsibility in Canada, and the public universities are mainly financed by monies supplied through the Provincial Government. This governmental financing presently covers both general purpose and specific purpose operating grants as well as capital grants for the servicing of debentured debt and borrowings.

The three types of funding are inter-related. Activities supported by limited-term, specific-purpose funds (e.g., engineering education expansion) ultimately become part of the ongoing operations when separate funding ceases and must, thereafter, be accommodated by the general purpose operating grant. Similarly, the provision of capital funding for new buildings eventually leads to increased operating charges which have to be covered by the operating grant. Anchored in academic decisions, these financial linkages underline the need for an integrated approach to financial requirements.

Public funding carries with it a related responsibility for the prudent use of such funds. This is an aspect that has taken on a new significance and, in this chapter, certain steps are described which go some way to meet the increasing requirements for accountability now being called for by the Government.

A. FINANCIAL REQUIREMENTS

1. Operational Funding - A Triennial Understanding

Working from the university estimates, Council, as a practical approach, seeks to identify a level of funding which - in its judgment - will keep the system in effective working order. Latterly, this level has been more than the Government was prepared to supply and less than the universities had requested.

In drawing up its recommendations for fiscal year 1986-87, Council considered a number of factors, including:

(a) Reductions in public funding which the government has been able to make available for general operating purposes since 1981/82.

The change in these grants is shown in absolute and constant dollars in the following chart.

UNIVERSITY GENERAL PURPOSE OPERATING GRANTS[1]
CURRENT AND CONSTANT 1985 DOLLARS
75/76 - 85/86

FISCAL YEAR	GRANT CURRENT DOLLARS (Thousands)	CONSUMER PRICE INDEX (Vancouver, July)	GRANT CONSTANT 1985 DOLLARS (Thousands)
75/76	150,200	59.2	318,668
76/77	170,400	64.7	330,792
77/78	184,500	69.2	334,873
78/79	200,578	74.8	336,799
79/80	217,226	80.5	338.927
80/81	239,612	88.0	341,992
81/82	271,712[2]	100.5	339,572[2]
82/83	300,993[2]	111.2	339,971[2]
83/84	300,993	117.6	321,469
84/85	285,943	122.0	294,381
85/86	286,571	125.6	286,571

1. Special Purpose Operating Grants (e.g. Non-metropolitan programs) have been excluded.
2. Includes $8 million Medical Expansion Program, previously funded as a Special Purpose Operating Grant.

The speed at which these reductions have been incurred has caused the greatest difficulty for the universities in accommodating the lower funding levels. Although the universities in most of the provinces have had to accommodate decreases in grants for FTE students since 1982/83, these grants have declined by far the fastest in B.C. universities: from ranking second among the provinces in 1982/83 to ranking ninth this year.

It is Council's view that the universities have acted responsibly in attempting to absorb these reductions. Council firmly believes that further cuts would put the universities' quality of instruction and research at risk.

(b) The lack of predictability in current budget procedures.

Although the universities have worked under the existing budget procedures for many years, their problems with the lack of predictability in funding became aggravated in the recent downturn.

(c) The Government's analysis, accepted by Council, of relative strength of the provincial economy.

(d) The need for faculty renewal.

Under ideal conditions, with a balanced age distribution of faculty, funding for new faculty appointments arises from normal retirements. In B.C., as elsewhere in North America, the age distribution of faculty is skewed, as a result of the unusual rates of hiring during the 1960's, followed by more than a decade with relatively few new appointments.

As a result, higher costs than would exist with a more uniform spread of all salary ranges impede the necessary faculty renewal process of hiring young scholars and scientists.

This problem is further compounded by a reduction of the grants, and has resulted in a marked weakening of the B.C. universities' competitive position in attracting faculty. Further erosion in its relative salary position would put B.C. at a real disadvantage compared to institutions in other provinces.

On the other hand, Council is also aware of the concern expressed by the Minister of Universities and his perception of the relative overstaffing at one of the universities, a matter Council is currently investigating.

After considering these factors, Council has made three recommendations concerning the governmental grant for general operating purposes:

i) That the Government recognize Council's view that the universities have responsibly borne their full share of restraint and the consequences of further cuts would unduly penalize university education and the province, generally. Consequently, Council has asked that Government make this recognition tangible by, at the minimum, covering the inflationary and attendant costs over this year's grant plus funding for engineering education expansion commitments in its 1986/87 operating grant to the universities (for details, see Council's August 1985 funding recommendations).

ii) That the familiar general purpose grant, itself, be determined in accordance with a new multiple-year, minimum-level funding proposal. A triennial understanding would commence in fiscal year 1986-87 and would extend through 1987-88 and 1988-89; in short, for the rest of this decade. Conceived as a base-line support level, the purchasing power of the Government grant should, of course, be kept constant (indexed). Council would not wish to prejudge how this understanding, which is of considerable significance in dealing with the immediate circumstances, might have to be changed in the light of experience, but the intention is that it be a rolling three year agreement.

iii) That the System Coordination Fund, first created by Council as a System Cooperation Fund within the UAP, be strengthened to a supplement of at least two percent of the grant for general operating purposes. This grant would be distributed by Council, but quite separately from the general purpose operating grant - and on different criteria.

Council intends that governmental funds made available at the base-line level, under the triennial understanding, would be largely employed in carrying out the existing mix of program activities. As an incentive for the infusion of desirable new programs or the necessary reconstruction of older academic areas, and to round off faculty renewal plans, it is Council's belief that a modest supplementary fund will be needed. (Council notes that supplementary funding has recently been introduced in Alberta, Saskatchewan, Quebec and Ontario, with the latter province having also set a precedent for predictable funding beyond the one-year timeframe.) A number of new programs, currently held in abeyance by the universities, could gradually be put into effect with the aid of this fund, with a view to roll the funding into the base operating grant of the universities.

In summary, then, an arrest to grant erosion, coupled with an inflationary adjustment to the universities' funding and funding for engineering education expansion commitments, as well as the implementation of the triennial understanding and the strengthening of a System Coordination Fund would, in Council's view, give the universities a clearer sense of direction and a much sought after ability to plan the use of their resources more efficiently.

2. Capital Funding

The Government has authorized a very substantial amount of capital investment in the three universities' physical resources over the past twenty years. And, prior to the period of restraint, Council maintained a five-year projection of needed replacements and desired new structures. In this experience, Council has found it increasingly difficult to determine a clear linkage between ongoing academic activities and the priorities established for desired capital additions.

Although committed to the reformulation of a meaningful five year capital plan, Council has, of necessity, concentrated its attention on prior

tasks, e.g. establishing a system wide academic development procedure from which will flow the capital requirements to house the programs.

The greatest capital need at present is to protect the existing investment in each university's physical plant from deterioration and obsolescence. In recent years, the annual Government funding for public works and renovations has been reduced to approximately half that of earlier years and a backlog of deferred maintenance is developing. Council has given its advice to the Ministry on this matter and the Ministry, in turn, informed Treasury Board this autumn concerning the situation.

Briefly, this advice states that Public Works and Renovations funding has three components:

a. an annual cyclical renewal fund to rectify normal deterioration (in the order of 1 to 2 percent of the replacement value of the physical plant of the universities);

b. the provision of one-time catch-up funding to counter recent low levels of funding (facilities audits are currently underway in the system which, when completed by the universities and reviewed by Council, will lead to a recommended amount of catch-up funding); and

c. the need to convert space to alternative uses in the face of shifting enrolment patterns and changing accommodation standards, the latter often imposed by Government. When few new buildings are being provided, renovations necessarily increase in importance.

One feature that is not generally known is that, in addition to funding capital projects at the universities, the Government has, also, been acting as a banker for the universities and enabling the institutions to borrow funds at a favorable rate of interest for certain capital projects, usually for ancillary enterprises. The entire cost of these projects, such as student residences, bookstores, and food outlets, will be recovered from revenues obtained from user fees. With lower interest rates and competitive prices in the construction industry, the universities have been making considerable use of this cooperative arrangement with Government: some $25 million of construction is currently underway or planned.

3. Equipment

Funding for university equipment comes from three main sources: the general operating fund, research grants, and a special operating grant from the Government for equipment. All three sources have problems associated with them, with the net result that there are very solid grounds for concern about the future adequacy of university equipment.

B.C.'s experience has been consistent with that of other jurisdictions which have experienced retrenchment: the strong pressure to preserve jobs means that reductions in operating expenditure are made first in non-staff areas, such as equipment purchases. Restricted equipment acquisition can be tolerated in the short term, but, over a period of years, the restrictions mean that students are being trained with obsolete equipment.

Research grants, which often make provision for equipment purchases, have been obtained with considerable success by many B.C. faculty members. However, these grants do not make provision for the overhead, or infrastructure, costs of operating the newly purchased equipment. When the university is unable to provide support for overhead costs due to financial restraint, the result is that the efficiency of equipment usage is impaired. Society is the ultimate loser when resources are used inefficiently.

The Government provides a special equipment grant which is used for some of the more costly equipment purchases. Grants in the order of $3 million annually in the late seventies and early eighties, which Council viewed as modest at the time, have subsequently declined to $1.25 million. When this sum is allocated among the three universities, the impact on any one institution, although beneficial, is too small to address the problem adequately.

B. ACCOUNTABILITY REQUIREMENTS

Inherent in the financial management of publicly supported institutions is a responsibility to account for the prudent use of public funds. The 1975 Report of the Independent Review Committee on the Office of the Auditor General of Canada defines this responsibility as follows:

> "Accountability in its simplest terms means the obligation to answer for a responsibility that has been conferred. It presumes the existence of at least two parties: one who allocates responsibility and one who accepts it with the undertaking to report upon the manner in which it has been discharged."

For a university, accountability includes:

- directing university efforts toward stated appropriate goals;
- ensuring that the outcomes are consistent with these goals and are achieved at a reasonable cost;
- substantiating the degree to which the university is achieving its mission and the validity of its expenditures.

The Boards of Governors, Council, the Ministry and Treasury Board all have related roles in assessing the performance of the universities: the Boards ensure that each institution has satisfied its internal requirements for accountability; Council evaluates the Boards' discharge of their responsibilities and, in turn, informs Government on the probity of the use of the provincial operating grant at a system wide level.

The universities, in accounting for the use of their resources, publish a wealth of statistical information about their activities and operations. In addition to meeting the detailed requirements of the Financial Information Act, the universities publish complementary information as to students served, faculty and staff employed, degrees awarded and other relevant data. Essentially, the focus of the reporting relates to quantifiable and measurable inputs: number of students, number of faculty and support staff, resources provided and expended.

In terms of general accountability, this reporting provides useful information for Government, Council and the public. However, in isolation, and without commentary by management, it falls short of demonstrating whether specific goals were achieved in a cost effective manner. Questions relating to cost effectiveness inevitably require the exercise of judgement, particularly in relation to a reference or standard. While it may be possible to develop such a reference in time, in the interim the universities need to develop ways of assuring the government and the public that the task was accomplished with due regard for economy and efficiency, consistent with appropriate quality standards.

Council's consultant, Kenneth Strand, on the question of efficiency in universities, concluded that:

a. an optimum allocation of resources to universities or within universities is not possible;

b. the best one can hope for is a more efficient allocation of resources; and

c. efficiencies are apt to be found in either quantitative techniques applied to portions of a university's operations or in methods of rational decision-making, which do not depend on the quantification of either inputs or outputs.

In past months, considerable effort has been expended by the universities, Council and Ministry officials in satisfying the obligation to account for the use of public funds. This continuing activity includes the development of an electronic data base, institutional fact books, performance indicators, revised audit statements, and has resulted in the generation of considerable information about the operation of our public universities. Nevertheless, there has been some dissatisfaction with the procedures that have been followed in securing these data and with their usefulness in meeting the Legislature's accountability requirements.

With this background, Council now wishes to achieve an understanding with both Ministry and the universities about the collection of these data. Council considers that there is a requirement for a dual framework which would enable Council to satisfy its own requirements for academic and financial accountability at the institutional level, as well as meet the Government's related requirements at the system level. Within such a framework, the intent would be to provide the universities with a clear set of reporting requirements - a check list which they would be expected to meet annually. In turn, Council would supply system-level information to the Government. Specific requests for information falling outside this regular flow would be accommodated on a case by case basis.

While collection of data relating to the universities is important, the interpretation of those data and their translation into useful information is a much more challenging and significant task. Council has been, and intends to continue, encouraging its staff to participate with university and governmental agencies in devising means for improving the analysis and interpretation of data relating to post-secondary education in B.C.

Conclusions

1. The universities, in the pursuit of their function of providing higher education, enter with students into an implicit contractual relationship, usually of four or more years duration. Under the present system, this contract is entered without the universities' knowledge of whether they will have the resources to fulfill their commitment.

2. Council's funding recommendation for 1986/87 recognizes three factors:

   - an arrest to the reduction of the operating grant, coupled with an inflationary adjustment and funding for engineering education expansion commitments,

   - a need for a forward looking "triennial understanding" which would provide the universities with a minimum agreed level of support for a three year period, and

   - in addition, a System Coordination Fund, established at least two percent of the triennial understanding to infuse flexibility in the system.

3. Council believes that an operating grant at a level lower than the one recommended would put the universities at risk, even if this reduction were to amount only to a failure to recognize the inflation factor.

4. A backlog of deferred maintenance is developing and requires prompt funding.

5. Restricted equipment acquisitions, over a period of time, mean that students are being trained with obsolete equipment.

6. The universities need to develop improved methods for assuring the government and the public that they are performing their task with regard for economy and efficiency, while maintaining appropriate academic standards.

7. There is a requirement to improve procedures for the collection, analysis and interpretation of data related to university education in the province. Council is of the opinion that it has an important role to play in this respect.

CHAPTER FIVE

FUTURE NEEDS

In the previous chapters, the extent to which the public universities are responding effectively to the felt needs of British Columbians was examined. It was shown that there is a well-arranged structure in place, and that while substantial changes in the student age distribution may occur, the overall student population is likely to remain static. In addition certain financial requirements were discussed. The purpose of this chapter is to consider what elements deserve attention if the foreseeable needs for the rest of this decade are to be covered.

A. IMMEDIATE ISSUES

The delivery of higher educational services has become a very competitive and costly undertaking, particularly if the services are kept up to date. Given that no modern economy can survive without high quality universities, every leading university is confronted with the common problem of how to render these essential services at an 'affordable' price.

Some of the internationally famous institutions have, customarily, relied upon a combination of private endowments, gifts, higher tuition fees, governmental grants (especially for research), and other charges as their sources of income. For them, the response to this challenge is, usually, 'more of the same'. But this answer is always coupled with equally careful attention being given to the selection and extent of the educational services that will continue to be supplied.

In the case of the eminent publicly-supported institutions in Canada, the principal line of funding recourse has been to the founding provincial governments and, whenever possible, to the Federal Government - with reliance upon endowments for special purposes and a resort to higher tuition fees occurring when all other measures had been applied.

Whenever substantive academic or other considerations prompted a minor re-arrangement of the existing mix of activities, an internal re-distribution of the funds might occur. But the introduction of a new program, or a significant modernization of an older activity, would usually precipitate a need for additional funds: certainly in the early or start-up phase and, frequently, beyond.

The provincial economy is slowly emerging from one of the more severe recessions of this century. It is the understanding of Council that the Government has concluded that:

- no large additions of funds can be generated for higher educational purposes at this time. Council's view, as stated earlier, is that, at a minimum, an arrest of the grant reduction should occur, together with an adjustment to recognize inflationary and attendant costs.

- whatever may have to be done to bring the existing university services

> into an activity mix more in line with the emerging needs of the province must, therefore, be done within the general limits of the operating funds now available. Council agrees with the obligation of the universities to attempt to accommodate these emerging needs and proposes, in the next chapter, the establishment of an advisory committee to facilitate this common objective.

Recognizing the impact such fiscal conclusions has upon the universities, which are still reacting to the earlier cuts in their governmental grants, the Government has been endeavouring to indicate what re-adjustments it would like to see adopted by the universities.

B. CONCERNS OF GOVERNMENT

What follows, in more detail, are some of the observations and concerns expressed by governmental representatives.

1. Governmental Short and Long-Term Objectives

In general terms, the Government believes that it has put into place a post-secondary education sector which the Minister of Universities has described as "the most comprehensive in terms of richness of opportunity and diversity of subject matter that is available in Canada."

Looking toward the future, the Premier has stated that educational goals should be developed by the post-secondary community to ensure that the educational skills provided are appropriate to the social and economic changes in B.C. society. As the means of accomplishing these goals, he sees the direct route lying through better institutional planning which, in turn, leads to an appropriate priority ordering that would guide the subsequent allocation of resources.

For his part, the Minister of Universities, Dr. McGeer, has requested that planning in the sector should stress five goals:

"1. a modest reduction in overall size, in keeping with post-secondary forecasts;

2. protection of core university programs;

3. allowance for growth of emerging programs of high academic quality, high student demand, and high provincial needs;

4. phasing out of low-quality programs and reduction in size of low-demand programs; and

5. enhancement of the overall excellence of the individual institutions."

2. Professional Education

The Minister has proposed that Council should ensure, in its synthesis of institutional plans (a project still in the formative stage), that "overall provincial needs are satisfied and appropriate opportunities for professional development offered." He observed that:

"If only one school for a particular discipline exists, for example, then the number of graduates should approximate the annual provincial demand in that discipline."

Dr. McGeer also notes that designated funding cannot be assumed necessarily to be the best way of achieving the best results towards this goal. Like the Premier, he believes that priorities for budget allocations must be set to meet what he terms "essential Provincial needs."

In response to questions posed by Council, the Ministry has elaborated Government's view as follows:

i) With regard to provincial priorities on the provision of professional educational opportunities:

"As we indicated in the discussion the ministry can respond only at the staff level and in quite general terms. Needless to say, the province has priorities on the provision of professional educational opportunities which will enhance the economic recovery and well-being of the province. Programs which come to mind immediately are computer science, business administration, engineering and applied programs of a similar type. It must be recognized as well that the universities are the sole route to accreditation in many of the professions and that our youth should have an opportunity to achieve professional status in their own province. Under that priority, programs such as medicine, rehabilitation medicine, law and other social service programs should be offered at levels which attempt to balance the need and demand. Each of these areas is sufficiently well understood by the universities and the specific faculties that when they are developing their plans we are confident that the universities will not suddenly swing to extremes in meeting short-term demands for professionals or to cut back training when the short-term demand is not there. Such is the case in engineering and forestry at this particular moment."

and

ii) With regard to Government priorities in program areas other than those in the professional fields:

"As indicated in the Minister's letter, there is a need to provide quality education in the core university programs but as discussed at the meeting, it is very difficult to define precisely what a core program is. Certainly the basic humanities, science and social sciences which the professional schools call upon for so much of their support have to be maintained. We might also consider some of the language programs as being core, such as French language education or Japanese or Chinese with the latter programs at specific universities but not necessarily duplicated across the system. It has been apparent for some time that the Minister's feeling is that 'excellence' should be the major criteria for selecting priorities within the core program of the universities."

Responding to Government/Ministry expectations, however, has been problematical. The main difficulty seems, in Council's view, to stem from

the lack of procedure agreed to by Government/Council/Universities on the development and implementation of policy. Two currently unresolved examples serve to illustrate the situation: computer science and physiotherapy and occupational therapy.

a. Computer Science

Computer science, as well as its cognate disciplines, has for some years been identified as an area of pressing student demand and high employment prospects. It figures prominently in the universities' academic plans and was listed, in the Ministry's response, among Government's program priorities. In their reporting, the universities describe the emphasis given to computer science instruction and research: they show significant enrolment increases since the late seventies and note that such increases have to be controlled for financial reasons through recently established enrolment quotas.

Although they are not entirely able to meet all the demand, the universities have attempted to meet the most urgent needs in spite of general funding reductions by reallocating funds from other valued academic areas. For instance, SFU has shown during the last few years an increase in full-time faculty complement of 17.6% and UVic of 14.4% in this field. As well, to meet increasing demands on their resources, the universities have increased institutional cooperation in their use of computer facilities (e.g. UBC and SFU); a determined effort has also been made to expand beyond strictly institutional resources and facilities and links have been established between the universities and industry (e.g. cooperative education programs, Discovery Parks, the Science Council of B.C., the B.C. Microelectronics Society, the recently approved UBC Centre for Integrated Computer Systems Research). The recent and accelerated establishment of engineering science, electrical and computer engineering undergraduate and graduate programs, with special Government funding, are also a measure of the universities' responsiveness to well defined trends.

Currently, the Minister of Universities has been exploring the feasibility of establishing, with some Federal Government financial assistance, an entirely new institution (the Advanced Systems Institute) specializing in computer science research and applied technology.

b. Physiotherapy and Occupational Therapy

In 1984 Council and the Ministry received a number of communications relating to the shortage in B.C. of trained professionals in these fields. The Minister referred the matter to Council for its examination.

The demand for graduates of these programs is well established through at least three sources:

. the Canadian Physiotherapy Association's statements

. the UBC Dean of Medicine (letters to Council, May 1984)

. the 1983 Western Canada Health Manpower Training Study, which recommends that UBC increase its future enrolment to 40 in occupational

therapy and 20-30 in physiotherapy (nearly twice the total output projected for 1986 at UBC).

Council enquired of UBC's plans and was told:

"Our ability to increase resources to any program at UBC at present is constrained severely. In the longer run such a reallocation may be possible but I can see no short term solution to this problem." (R.H.T. Smith, 28 March 1984)

The Government's views, as understood by Council, suggest an implicit inference which, in an over-simplified way, could be stated like this: The fact that nearly all of the high student-demand programs have limited entry (a long-standing practice for some) is taken as a form of confirmation that the universities' priorities are out of alignment. Because they are in high demand, these programs must point toward employment opportunities. The employment opportunities may very well be in sectors of expanding economic strength and, consequently, socially and economically desirable. Why then do these restrictions persist?

This is an involved question. As the subsequent information brings out, the universities generally offer two reasons for the restrictions (other than purely academic qualifications). One, already identified, is the need for funds if additional student spaces are to be opened up in these, usually costly, programs. In some disciplines there are also built-in deterrents to contain the number of students that can be properly handled (a quality consideration).

The other reason relates to the relatively short supply of highly-qualified faculty candidates in some of these disciplines (computer science, accountancy). In the bidding that goes on for outstanding faculty, the more affluent institutions often have the competitive edge. But, in any event, recruitment likely will be expensive and upsetting in a collegial environment.

In present circumstances, these answers, pertinent though they may be, have a negative overtone.

From Council's perspective, the extensive transformation implied in the Government's 'priority' approach could, in realistic terms, extend over several years. As a more attainable objective, the Government might consider letting the universities and Council quickly identify the most promising cases for early attention. This is discussed more thoroughly in Chapter Six.

In the meantime, as part of the general response to the Government, Council will consider suspending the approvals previously given to those programs currently held in abeyance for financial reasons[4]. Then with the

---

4 UBC: Master of Journalism, B.Sc. in Atmospheric Science and Diploma in Meteorology; SFU: Major in Visual Arts; UVic: Basic B.Sc. in Nursing; M.A. in Child Care; Master in Social Work; B. in Administrative Studies; M.A. and M.Ed. in Early Childhood Education; Diploma in Native Indian Language Teacher Training. These programs were approved on academic grounds, but not declared eligible to receive subsidization from the Government's operating grant under the priority concept. (see p.61)

aid of the proposed System Coordination Fund, Council could assist the most promising proposals, from a priority standpoint, to get underway.

C. FUTURE ACADEMIC DIRECTIONS

The exchange of information with the universities on the subject of future intentions has been incomplete, but a general impression can be given.

Each president submitted to Council, in August 1985, a personal statement of his institution's goals and objectives over the next five years, as well as a response to a series of planning questions asked by Council. Similarly, the Ministry was asked to identify some program priorities as guidance to Council and the universities.

These documents reveal certain trends. First, they indicate the continuation of some straightforward developments such as, for instance:

a. the institutions' determination to enhance the quality of core subject matters, whether disciplines in the arts and science or essential professional programs; or,

b. the prediction that certain fields of study, where future employment is perceived to be promising, will continue to be in high demand, e.g. computer science and its cognate programs, particularly electrical and computer engineering, business education;

c. increasingly applied research in the social sciences disciplines. At one institution alone, for instance, a current list of topics would already include:

    . anthropology: medical anthropology, population studies, cultural resource management, etc.;

    . economics: econometrics, cost benefit analysis, natural resources, industrial organization, regional development, Masters level cooperative education, etc.;

    . geography: natural resource management, tourism, urban development, geology, cartography, regional development, etc.;

    . political science: local government, international affairs, etc.;

    . psychology: lifespan development, gerontology, neuropsychology, etc.;

    . sociology: gerontology, survey research, sociological aspects of industrial organization, etc;

d. administrative reorganization to reflect better some commonality in various disciplines, with similar applied and theoretical approaches (e.g. the implementation at SFU of a Faculty of Applied Science, combining the departments of Engineering Science, Computing Science, Kinesiology, Communication and Natural Resource Management).

The documents also project a greater flexibility in adjusting to practical constraints (financial and disciplinary) through a combination of academic and administrative initiatives: an enhancement of intra-institutional disciplinary complementarity, as well as inter-institutional collaboration in specific topical fields of research and instruction. For example, at random:

a. the facilitation through university-wide interdisciplinary cooperation of the emerging thrust in biotechnology and the expansion of such fields as molecular genetics, computer science and cell biology. An enormous impact on industry, health care and lifestyle is anticipated in these fields;

b. more integrated approaches in health related studies, including not only professional preparation but lifestyle management. In this context, studies in gerontology and allied fields are expected to increase;

c. the expectation that programs concerned with environmental studies will gain in popularity: their multidisciplinary approach are reflected in the political, social, economic and scientific aspects inherent in environment and land management; as well, regional and rural development studies have offshoots in such applied fields as tourism, land development, and resource based economic development;

d. the strong interest elicited in the Pacific Rim countries will span the humanities, social sciences, education, law and commerce. Multi-disciplinary programs with a socio-economic, cultural and geographic focus will respond to these developing needs at each institution as well as through inter-institutional cooperation, in support of which Council has recently approved funds for Tri-University Pacific Rim Studies. In recognition of the national importance of this field, the Ministry of State has funded four centres of excellence which will contribute to stimulate ongoing faculty and student interest in these studies at all three institutions: Chair of International Trade, Asia Pacific Region (UBC); Asia Pacific Chair, Business and Trade (UVic); Chair in Asia Pacific Studies, Japan (UVic); Chair in Asia Pacific Business Studies (SFU); Asia Pacific Business Centre (UBC/SFU/UVic);

e. joint endeavours are likely to increase. While the large scale and formal arrangements of TRIUMF, WCUMBS and the Asian scholars have already been mentioned, many short-time and often project-oriented examples of collaboration also exist and are expected to increase. Such current projects are:

   . the establishment of a Superconducting Quantum Interference Device (SQUID) collaborating group of SFU and UBC Imaging Centre;

   . a joint application for a cyclotron for dating archeological and geological specimens;

   . a proposal for joint program offerings by all three Faculties of Education in non-metropolitan areas.

One of the most significant statements in terms of the general direction of individual institutional objectives and their role in a system structure was made by the president pro tem of U.B.C.:

> "Many universities will have difficulty keeping abreast of scholarly developments on a broad front, and there will be a gradual but relentless trend towards specialization...A major university must identify its comparative advantages as the basis for the pursuit of excellence; at the same time, it must ensure competence across many fields, so that these can properly contribute to the major areas of thrust. These comparative advantages will flow from the mix of disciplines and areas of study in the university, from the relationship with other tertiary educational institutions in the same jurisdiction, and from the cultural, social and political context in which the university finds itself. The successful university will have defined its role with judicious care, recognizing that which it cannot be all things to all people, its credibility - and indirectly, its support base - will depend upon the clarity with which both Government and citizenry perceive and identify with this role."
> (R.H.T. Smith, July 1985)

These thoughts reflect a central element in Ontario Universities: Options and Futures, 1984 [The Commission on the Future Development of the Universities of Ontario ("Bovey" Commission)].

> "...the encouragement of further differentiation in the roles of the Ontario universities through evolution within a competitive context, influenced by incentives, in order to ensure appropriate concentrations of academic strengths in areas of intellectual and social importance and diversity of choice for students."

Council believes that all our universities have now reached a level of maturity such as to have in place their undergraduate, and most of their graduate programs in core arts and science disciplines. No major change or costly curriculum innovation is anticipated in this area: the scientific disciplines will continue to offer essential support to increasingly popular fields such as engineering and health related programs; the humanities and social sciences will remain strong in their own right and through their equally essential application to other fields of study. The emphasis is expected to be on maintaining and even enhancing the quality of these programs. While it is recognized that inter- and multi-disciplinary approaches in these and cognate fields may lead to the introduction of new programs, it is expected that these programs will be based mainly on existing courses and will require only modest internal reallocations of resources.

The institutions' concern has increasingly focussed on the question of program trade-offs. It would be misleading to assume that discontinuance or attrition of a program is directly translated into identifiable enhancement of another program or into new program development; in fact, funds released through such decisions are often simply applied to the maintenance at the same level of existing offerings. Nevertheless, these academic and administrative decisions are a first step in ensuring the vitality of the system and its necessary renewal.

To guide such institutional decision-making and to enable Council to coordinate the approval of new programs, Council believes it would be appropriate and productive for each university to develop an institutional role statement within the general framework of the proposed system mission statement and the context of the 'priority concept' discussed in the next chapter. Council invites consultation with the universities to discuss how such statements might be formulated in the interests of the institutions individually and collectively. Given their existing commitments, it is now the time for each university to give some provisional indication of the niche - and the extent of the intended educational penetration (initially in global terms, such as, the number of FTE students on campus) - that it seeks to occupy as it moves toward an optimal size.

The institutions have not identified lack of quality as being the reason for discontinuing or seriously reducing some programs; rather, discontinued programs have been described as a result of diminishing demand (e.g. slavonic studies), as falling outside conventional university mission (e.g. dental hygiene), or as having been dropped as a result of administrative reorganization (e.g. film). Council is anxious to see program discontinuance rationalized, whenever possible, among the institutions, and has requested to be advised of institutional plans in these matters at the same time as the university senates are so informed.

But institutional trade-offs can only go so far in supporting the natural evolution of university programming. Apart from the creation of externally funded engineering programs and the initiation of programs which could be internally funded, our institutions have recently kept the introduction of new programs in abeyance: journalism, atmospheric science, administrative studies, graduate child care programs, etc., all approved by the Council within the past three years, are yet to be mounted. The institutions have reviewed them, sometimes modified them, but still have not implemented them.

Another concern was raised in the context of Government's expectations for higher education: the balance to be struck between general and professional education, and the process by which future development should occur. The scope of general education programs in this province is, in Council's view, adequate at the current level. Any developments in this area, which in future might be necessary, could be funded by a combination of institutional reallocations and, if Council's recommendation is approved, of support from the System Coordination Fund described in Chapter Four.

With regard to professional education programs, Council believes that their scope is, on the whole, adequate, but in cases where output is below Provincial needs that more places should be provided for students within these programs. This is necessary to give British Columbians opportunities equal to other Canadians. However, it is clear that such an expansion would be costly and cannot be approached in an across-the-board manner.

Finally, on the question of the delivery of academic courses and professional development programs to the non-metropolitan areas of the province, Council wishes to reiterate its support of the universities' effort in this domain, both independently and through the Open University Consortium of B.C.

Conclusions

1. High quality university education is essential for the survival of a modern, productive economy. To provide it is expensive if measured in financial terms, but inexpensive if measured in terms of the benefits it brings to the economic and cultural health of society.

2. No large addition of funds can be expected in the foreseeable future from Government, which has traditionally provided the principal source of university funding; thus any changes must be implemented within the limits of present operating funds.

3. Ministry priorities relate to constraining size while protecting core programs, maintaining quality, and ensuring that professional programs have an output approximately equal to provincial needs.

4. There appears to be a Government concern that the priorities of the universities are out of alignment with the economic needs of the Province, and a parallel university concern that changes are difficult to achieve without additional funding.

5. In general terms, the universities' future academic directions will tend to focus on continuing the current instructional and research developments; on providing greater flexibility in adjusting to constraints, often through intra-institutional complementarity and inter-institutional collaboration in specific fields of research and instruction; and on reassessing their specific role within the university system, looking to greater institutional specialization. Council invites the universities to develop these roles explicitly.

CHAPTER SIX

PLANNING AND PRIORITIES

In Chapter One the loosely interconnected participants involved in the process of delivering higher educational services in B.C. were identified. With regard to the university system, the importance of coordination between the participants was emphasized by the Premier when he met with Council in December 1984. Mr. Bennett stressed his desire that Council and the university presidents should work cooperatively to synchronize their efforts in dealing with several of the major issues discussed earlier in this report; especially, in grappling with the problems of future development. At the time, Council and the presidents agreed to proceed accordingly. Since then, Council, the presidents and the universities' senior administrative officers have consulted frequently and a similar working arrangement has existed between the Ministry and Council. The present report has had the benefit of these varied exchanges.

This chapter considers further improvements to assist the universities and government achieve their respective goals in concert with one another. Particular attention is paid to the the planning process, as well as to the need to improve information management and the requirement to develop a system for priority identification.

A. NATURE OF THE PLANNING PROCESS

There are advantages and disadvantages to what might be called institutional planning[5].

In the day-to-day adjustment of existing courses and programs, the responsible operating departments and faculties are in the best position to determine what changes, if any, ought to be made[6]. Questions concerning academic jurisdiction over the content of contemplated program innovations do arise and must eventually be settled to the satisfaction of Senate before

---

5 The term planning is used here to represent a decision-making notion: e.g. how does one intend to accomplish something, as in the choosing of the steps to be taken in proceeding along an intended route. Who is the decider? The University Act, sec. 46, states two of the prime directives of the universities are: "(b) to provide instruction in all branches of knowledge; (c) to establish facilities for the pursuit of original research in all branches of knowledge;..." and in Part 12, sec. 69, among other tasks, requires the universities "(c)...to prepare and forward to the universities council plans for the short term and long term academic development of the universities..."

6 Regrettably, they are not so well positioned when it comes to the financial viability of such changes, in contrast to the management practices followed by some of the most successful universities elsewhere (Harvard), where budget-making requires a combined effort at both the departmental/faculty and central administration levels in keeping income and expenditures in balance.

the changes are permitted. And there are perennial questions concerning the source of any needed additional funds, the realistic apprehension being that existing programs may have to make sacrifices if new plans are to be implemented. At the institutional level, this latter concern becomes intertwined with the ubiquitous question of fairness in the allocation of governmental grants as distributed by Council.

The Government also claims a legitimate interest in prospective institutional program changes, particularly to ensure that unnecessary duplication or wasteful practices are not being built into a publicly-funded activity. This task has been assigned, in part, to Council. In other instances, where it wished to direct funds towards a specific end-use, such as medical and engineering expansion, a designation would be stipulated as a line item in the provincial budget.

To these familiar concerns there has recently been added an over-riding policy imperative: the recognition of a 'priority concept'. In some respects the priority concept may be regarded as a supplement to, or a substitute for, the practice of designated funding. The important difference is that the carrying out of the government-selected purposes, and the manner in which they are achieved, are left to the universities and Council, rather than implemented by government designation in the budget. This topic - discussion of the priority concept - forms the concluding part of this chapter.

Council recognizes it has a responsibility to coordinate the collection and analysis of information from the universities, and other sources, so that it can present a reliable overview of the system as a whole. There is a statutory requirement for Council to become knowledgeable about the existing and pending activities at the three universities, because, among its several important duties, Council is obligated to approve or disapprove the introduction of new programs. The force of this approval process is that it identifies those programs which, if implemented, would likely be considered eligible to receive support from any additional funds supplied through governmental grants.

It is Council's impression that, notwithstanding its statutory duties, it is in everyone's interest that such an overview should be comprehensive, but not interruptive to the well-ordered management of each institution. Council seeks to establish a collaborative exchange of information with the universities in order that informed comment can be made about the system as a whole.

B. RECOGNITION OF A PRIORITY CONCEPT

An important and pressing issue confronting both the universities and Council today concerns the infusion of a new screening operation, called here the 'priority concept'. It would affect some existing, all pending and, in the near future, all prospective new university programs.

In the existing competitive setting, where each self-governing institution does its own forward planning, there are various institutional aspirations which contribute to 'the individuality' of each university.

However, each institution, quite appropriately, develops and fosters its own aspirations with only limited recognition of the aspirations of the other institutions. If a requirement for a joint representation were imposed on the universities it would then be natural for them to seek a group representation of their aggregate 'individualities' which might either:

a. compile a simple aggregation of the three individualities - so that every institution would receive what it wanted, even if overlapping occurred, or

b. compile a reduced compromise list drawn from the aggregate individualities.

The earlier five-year capital schedules compiled by Council were, essentially, examples of the first: a sum of all the universities' individualities, ranked in accordance with each university's own priority setting. In an effort to gain a general overview as to how these capital requirements were linked to the mainstream academic activities, Council, three years ago, started preliminary work on a strategic planning project. Early in the planning process, it became clear that the universities were more preoccupied with a perceived threat to their attained standard of governmental support, and the planning effort was suspended. Then the full force of the restraint period began to be felt and seemed to confirm the universities' misgivings.

A turning point came in December 1984. In a series of meetings and exchange of letters between the Premier, the Minister, Council and the Presidents, a new working relationship emerged which formed the base for much of the planning effort during 1985. But the universities' growing concern over their constrained financial state and outlook, and the continuing uncertainty on the part of the Government about the contribution the already expensive higher education structure could, and would, make to the economy at a time of genuine economic distress, have led up to the present need for general reassurances all round - for both the universities and the Government. At least, these are some of the impressions that Council has had in mind in drafting this report.

At a meeting with the Premier and the Minister of Universities on December 13, 1984, the impact of the severe recession, and its implications for the potential coordination between the universities and Council, with reference to Council's forthcoming advice and prospective plans, was discussed. The Premier indicated that he felt any useful work in this direction had to start with the premise that the President and the Governors of each institution would cooperate with Council in a general reassessment of the academic priorities in place.

After a subsequent meeting with the universities, Council informed the Government that several commitments had, indeed, been made. Out of these interchanges, Council drew up a plan of action which involved for 1985/86:

a. the establishment of individual academic priorities determined by each university individually;

b. the review and synthesis of each university's academic priorities into a system of higher education offerings by Council in consultation, when necessary, with the Government;

c. the allocation of the Government's operating grant by Council in accordance with the priority program of the system.

A similar but differently worded exchange occurred between Council and the Minister. In an important letter, dated January 17, 1985, Dr. McGeer reminded Council that he had urged the preparation of an ongoing (five-year) capital plan which would give the Government a reliable forecast of the universities' capital requirements and priorities. Insofar as a comparable scheme could be constructed for the academic side of the universities' spending priorities, the Minister formally requested that the effort be made.

In doing so, however, he gave Council his personal overview. An abridged version is useful, here, to grasp the essence of his perception:

> "In the 1960s and the 1970s, the British Columbia university system underwent rapid expansion...fuelled by a variety of factors...the principal factor...was a boom in the number of university-age men and women....That population boom would appear...to be over...our university system must therefore anticipate consolidation and not growth.[7]
>
> ...The peak year for (high) school students was 1977, with a progressive decline occurring thereafter...on average, our post-secondary institutions are likely to experience a population decline almost until the turn of the century.
>
> ...Since the overall demand can be expected to decline over the next few years, it follows that our institutions, including universities, should examine all of their programs to determine which ones will require further growth and strengthening, which ones should be maintained at their present level, and which ones should be reduced in size or phased out.
>
> ...University autonomy should be preserved with the Universities Council acting to ensure that the individual plan of each university will result in an effective harmonious overall plan for the Province. [Then follows the five goals detailed already on page 42.]
>
> ...In keeping with the long tradition of outstanding universities around the world, there should be no hesitation in terminating, or reducing, programs that fail to meet rigorous academic standards. [He means, here, not to accept mediocrity as the price of growth]...Nor should there be any hesitation in demanding a high standard of performance from students, particularly in entrance requirements. Every effort has been made by the government to provide alternative opportunities for students to participate in challenging post-secondary programs through the Open Learning Institute and our other provincial post-secondary institutions. By keeping these principles in mind, it will be possible for the universities to adjust to a more modest size and, at the same time, significantly enhance their quality and academic reputation."

---

7 See pages 24-26 for Council's observations on student numbers and the age mix.

It should be noted that the Minister did not suggest that the transformation he advocated (which would likely involve a shift to the more costly end of the higher education spectrum) would result, of itself, in less spending. But the requirement that the aggregate expenditures had to be reduced, and be kept down, did become apparent soon after the foregoing exchanges had taken place.

In fact, time was running short. The 1985/86 estimates, of course, had been submitted back in 1984 and, in a few weeks, the provincial budget informed Council and the universities that the Government had found it necessary to impose a further cut in funding. However, urgent representations led the Government to provide an adjustment fund, a one-time only provision, having some financial implications for the following years, which Council and the universities could use to downsize the level of university spending to a lower base-level position. The presumption was that, if the proper rearrangements to the scale of educational services were to be skillfully carried out, then the Government would endeavour to support the reduced activities as fairly as the straitened financial position of the Province could afford.

All the funds provided for the 1985/86 fiscal year have been allocated and the universities have been able to achieve considerable economic reductions in their operation. However the question of how to provide for the future in an intelligent, coherent and planned manner remains to be resolved.

It is Council's understanding that, whether stretched out over a five-year period (as the Minister may have intended) or put into force over a shorter span of time, there is a firm expectation that the Government does still wish to learn how the universities and Council would propose to plan for the future. In what fashion will there be an attempt to focus the universities' academic operations, in some complementary but realistic way, upon the Government's own serious efforts to restore the competitive position of the provincial economy? Furthermore, it is clear that Government wishes the goals of planning and financial restraint to go hand in hand with academic excellence and improvement in the quality of training provided.

Council is of the opinion that these various requirements could best be met by the recognition and adoption of a priority concept for the assessment of university programs. Furthermore the Council, with the support of Government and with the collaboration of the universities, proposes to establish a standing committee with the important and definitive task of examining overall program priorities. It is the opinion of Council that such a committee, which should be advisory rather than executive, would provide an invaluable forum for the interchange of opinion and ideas between the universities, the Government and the Council. This committee, which in Council's view should be made up of Council and the presidents, with members of the Government and their senior officials being invited from time to time to attend and advise on its deliberations, would be a vital tool to assist all the parties develop their individual planning, based upon a knowledge of the views and opinions of the other parties. It is believed that this would constitute a major step toward achieving the legitimate objectives and aspirations of the universities, the Government and Council.

Conclusions

1. The universities and their respective faculties and departments are in the best position to conduct definitive program planning within their respective institutions.

2. The government has a legitimate interest in overall program planning and emphasis at it applies to the development and support of the provincial economy.

3. Council has a responsibility to assist both the universities and the government in attaining their objectives in a collaborative and coherent fashion.

4. There is a need to improve the allocation of program planning priorities based on the input of each university, Government and Council.

5. The Council proposes to establish an advisory standing committee made up of Council and the presidents, acting in consultation with Government representatives, as required, and responsible for reviewing material relevant to overall program planning.

CHAPTER VII

MAJOR ACTIONS ARISING FROM THE SUBMISSION

A primary purpose of Council's work is to assist in the establishment of an iterative process of priority program planning for university education in B.C. This process is designed to provide for the universities' aspirations and the Government's objectives, as defined by the respective parties and subsequently coordinated.

The major actions required include:

1. by Government

   a. adopt a mission statement defining the objectives of public university education in B.C.;

   b. support Council's formation of a standing committee on university program planning priorities, and subsequently contribute to the deliberations of the committee;

   c. establish a triennial understanding and a System Coordination Fund for the operational funding of university education, based upon Council's funding recommendations;

   d. provide capital funding for annual cyclical renewal to meet normal physical plant deterioration and conversion of space to alternative uses;

   e. define, with Council, public accountability requirements.

2. by Council

   a. form a standing committee, with Government support, on priority program planning for university education comprised of Council and university representation with Government input by invitation to address, among other matters, the following agenda:

      . review of the approved new programs temporarily held in abeyance;

      . the provision of professional educational opportunities including priority, numbers of students and funding;

      . the examination of the participation rate including its determinants, adequacy and desirability of change in it;

   b. reconstitute Council's standing committee on university research to address, in consultation with the Science Council, issues relating to research support and utilization by Government;

c. consult with Government and the universities to develop a dual framework to satisfy Council's accountability requirements at the institutional level and to serve as a basis for meeting the Government's related requirements at the system level;

d. allocate system coordination funding, in light of an initial review of new programs held in abeyance and other advice of its standing committee on priority program planning.

3. by the Universities

a. participate in the deliberations of the standing committee on program planning priorities;

b. formulate an institutional role statement in light of the system mission statement, discussions of the standing committee on program planning priorities, campus aspirations and funding levels. It should address such matters as academic development priorities, size of enrolment, and size of faculty complement including renewal requirements;

c. develop a triennial budget request based on a role statement and academic priorities;

d. advise Council on university research through participation in Council's standing committee on university research;

e. assist Council in developing a satisfactory framework for public accountability.

This submission presents the Universities Council's current thinking on the state of the university system in British Columbia. The proposed actions, if found acceptable, require continued cooperation of all the partners in this enterprise - the Government, the universities and the Council. Council looks forward to coordinating this concerted effort to enhance university education, a vital element in the well being of the economy of the province and everyday lives of its residents.

*Underlined page numbers indicate a major reference.

INDEX

A

Academic priorities,
see Priority concept
Accessibility, 20-23, 30
Accountability, 14, 31, 36-37
Accreditation, 15*
Actions arising from the report, 55-56
Adjustment fund, 53
Administrative reorganization, 44
see also Universities, future directions
Adult education, 26-27
participation rates, 26, 27, 30
Advanced Systems Institute, 42
Asia Pacific Chairs, 45

B

B.C. Health Care Research Foundation, 18
B.C. Microelectronics Society, 18, 42
Bennett, W.A.C., 4, 40, 41, 49, 51
Bovey Commission,
excerpts of statement, 46
Bridge to the Future Fund (SFU), 17

C

Canadian Occupational Projection System (C.O.P.S.), 28
Canadian Physiotherapy Association, 42
Capital funding, 34-35
Carnegie Foundation for the Advancement of Teaching, 27
Centre for Integrated Computer System Research (UBC), 18, 42
Chairs (Asia Pacific), 45
Community colleges, 5-6
role of, 22-23
university transfer programs, 6, 20, 21, 22
Computer Science, 42, 44
Continuing education, 9, 21
Cooperation,
see Institutional cooperation
Core programs, 11, 13, 40, 44, 46
definition of, 41

D

Data collection & reporting requirements, 37, 50
Discovery Parks, 18, 42
Distance education, 21-22, 29, 30
enrolment in, 29
see also Open Learning Institute
Knowledge Network of the West
Downsizing,
see Universities, downsizing

E

Educational leave policy, 27
Efficiency in universities, 37
Engineering education expansion, 33
Enrichment,
see Personal enrichment
Enrolment, 20
colleges & institutes (1969-1984), 8
quotas, 42, 43
universities (1969-1984), 8
university transfer, 20
see also, Participation rates
Entry, (restricted, unrestricted), 23
Equipment, 35-36
Evaluation, 16, 19
see also Program review
External indicators, 16
External institutions, 8

F

Faculty,
shortage of, 43
Faculty renewal, 16, 33
Financial Information Act, 36
Financial requirements, 32-36
Financial restraint, 2, 22, 32, 33, 35, 39, 40, 48
Five year capital plan, 34, 51, 52
Forward commitment, 31
Funding, 2, 31-36, 39
base-line support level, 34
capital, 34-35
general purpose, 32-34
lack of predictability, 33
special, 42
supplementary, 34

*Underlined page numbers indicate a major reference.

G

General purpose operating grants, 32-34, 38, 52
see also Funding
Government (provincial),
and research, 19
and university relations, 2, 3
educational concerns, 40-44
equipment grants, 35-36
funding of ancillary enterprises, 35
program priorities, 40-43
see also Financial restraint
Funding

H

Harvard (budgetary procedures), 49

I

Information requirements,
see Data collection & reporting requirements
Institutes, 6-7
Institutional cooperation, 22, 42, 45, 48, 49
Interior University Programs Board, 21

K

Knowledge Network of the West, 7-8, 21, 22, 29

L

Larkin, P.A., 17, 18
Library holdings (UBC), 16
Lifelong learning, 9, 27, 30
see also Adult education
Personal enrichment

M

McGeer, Patrick, 14, 33, 40, 41, 42, 51, 53
statement for university system, 53
Manpower planning, 28-29
Manpower needs, 41, 48
Mission Statement (universities), 8-10
Ministry of Universities, Science and Communication, 19, 35, 36, 37, 41, 42, 49
see also McGeer, Patrick
Government (provincial)
Motivation, 27

N

Non-credit courses
see, Continuing education
Non-metropolitan programs, 47
see also Continuing education
Distance education
Non-theological institutions, (non-public), 8

O

Occupational Therapy,
see Physiotherapy and Occupational therapy
Ontario Universities: Options and Futures, 46
Open Learning,
see Distance education
Open Learning Institute, 6, 7, 12, 14, 21, 22, 29
Open University Consortium of B.C., 7, 22, 29, 30, 47
Operating grant,
see General purpose operating grants

P

Participation rates, 24-26, 30
Canadian average, 24, 25
determinants, 25, 26
non-university institutions, 25
part-time, B.C., 25
problems with data, 25
universities, 25
Personal enrichment, 9, 27, 28, 30
see also Lifelong learning
Physical plant, 1, 35
Physiotherapy and occupational therapy, 42-43
shortage of manpower, 42
Planning, 40, 49-50, 54
faculty responsibilities, 49
Population projections, 24
18-20 age cohort, 24
Post-secondary education,
structure in B.C., 1, 4-8, 10, 21-23
Post-secondary Institutional Research Committee of B.C., 25
Priority concept, 50-53
proposal for a standing committee, 53
Professional development, 9, 27
see also, Retraining
Professional education, 9, 40-44
Program review, 14-15, 19
existing programs, 14
new programs, 15
professional programs, 15

*Underlined page numbers indicate a major reference.

Program trade-offs, 46
Programs,
accreditation, 15
approval of, 15, 50
balance between general & professional, 47
discontinuance, 47
diversification, 12-13
duplication, 12-13
flexibility, 21,22
off-campus,
see Non-metropolitan programs
priorities, 42, 50-53
professional,
see Professional education
quality measures, 14-16
scope of, 11-14
similarity, 12-13
specialization, 14, 19, 23, 46
triplication, 12, 13
see also Core programs
Priority concept
Programs of Distinction funds, 18
Provincial institutes, 6-7
Provincial needs,
see Manpower needs
Provincial priorities,
see Government, program priorities
Public Schools Act, 6
Public Works and Renovations funding, 35

Q

Quality,
measures of, 14-16

R

Recession,
see Financial restraint
Recurrent education,
see Retraining
Lifelong learning
Research, 17-19
collaboration, 17, 18, 19, 42
considerations for future policies, 19
deficiencies in monitoring, 18-19
differenciation, 17
equipment, 35-36
funding, 17, 18
topics (social sciences), 44
users, 17
Research Quality Fund, 18
Restraint,
see Financial restraint
Retraining, 27, 28
Retrenchment,
see Financial restraint

S

SFU,
see Simon Fraser University
Science Council of B.C., 18, 42
Simon Fraser University, 4
Smith, R.H.T., 43
statement of institutional objectives, 46
Strand, Kenneth, 37
Students,
performance of, 16
System Cooperation Fund, 18
System Coordination Fund, 34, 44

T

Transfer rate (from grade 12 to post-secondary), 26
Triennial Understanding, 32, 34, 38
Trinity Western University, 8
TRIUMF, 17, 45
Tri-University Pacific Rim Studies, 18, 45

U

UAP,
see University Adjustment Program
UBC,
see University of British Columbia
UCBC,
see Universities Council of B.C.
Universities,
accountability, see Accountability
autonomy, 1, 11, 52
downsizing, 1, 2, 41, 48, 53
future directions, 44
individuality, 50-51
objectives, 9-10, 21, 44, 49
Universities Council of B.C.
on accessibility, 23
on data collection, 37, 50
on enrolment planning, 29
on planning, 49, 51
on research, 18-19
perception of the university system, 1, 21
program approval criteria, 12, 15

*Underlined page numbers indicate a major reference.

recommendations for governmental grant, 33, 34
review of existing programs, 14
suspension of approvals of programs in abeyance, 43
University Act, 8-9, 11, 18, 31, 49
University Adjustments Program (UAP), 16, 34
University - Industry Liason Program (UBC), 18
University of British Columbia, 4
University of Victoria, 5
University system, 1, 11, 46, 52
University transfer programs, see Community colleges, transfer programs

W

Western Canada Health Manpower Training Study, 42
Western Canadian Universities Marine Biological Society (WCUMBS), 17, 45